Implementing Environmental Policies in India

A Case Study of Scandinavian TNCs

Anne-Line Sandåker

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Department of Culture Studies and Oriental Languages

University of Oslo

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Abbreviations

CCoE	Chief Controller of Explosives
(C)ETP	(Common) Effluent Treatment Plant
CPCB	Central Pollution Control Board
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GPCB	Gujarat Pollution Control Board
HR Manager	Human Resources Manager
HSE	Health, Safety and Environment
IMF	International Monetary Fund
MoEF	Ministry of Environment and Forest
MPCB	Maharashtra Pollution Control Board
NGO	Non Governmental Organisation
NOC	No Objection Certificate
OECD	Organization for Economic co-operation and Development
PIL	Public Interest Litigation
ppm	parts per million
SPCB	State Pollution Control Board
TMPC	Tamil Nadu Pollution Control Board
TNC	Transnational Corporation

Abstract

Indian authorities have developed an extensive set of environmental laws and policies, but have in many in many instances failed to prevent environmental degradation. There are several factors contributing to the gap between theory and reality, such as insufficient resources, corruption and lack of priority on the governmental agenda. Transnational corporations (TNCs) have often been a subject of controversy in the debate on environmental degradation in the South, and are argued to be both a source of and solution to environmental problems. The purpose of this thesis is to study what makes TNCs implement environmental policies and even go beyond national requirements. I approach the topic in a theoretical and empirical way, in which the first part of the thesis describes and discusses TNCs' potential environmental role and the Indian authorities' ability to enforce the government's own policies, with reference to the hypotheses of pollution halos, pollution havens and the "soft state". I link this to the empirical findings in the analysis chapter in the final part of the thesis.

Through a case study of four Scandinavian TNCs, I explore the ways in which they have been encouraged in and hindered from implementing environmental policies. They are proactive in their environmental management, and through semi-structured interviews I got insight into what they emphasised as the most important factors. All of the case companies emphasized the importance of pressure from an authority, be it corporate or governmental. While pressure from the governmental authority was considered to be decisive for corporations to implement the governmental environmental policies, encouragement and requirements from TNCs' headquarters, suppliers and customers was essential for proactive action beyond the national laws. They were encouraged through training and guidance. The second most central factor, according to the informants, was the importance of knowledge about the problems, and how to prevent and solve them. Pollution prevention measures are considered by many as a burden and a potential expense (thus discouraging environmental measures) and this was attributed by several of my informants to a lack of knowledge. Several of the case companies had however managed to turn the company's proactive strategies to their own advantage, achieving a so-called win-win situation.

Based on this study's findings I find little evidence supporting the pollution haven hypothesis and the "soft state" debate as far as TNCs in India are concerned. Proactive TNCs, such as my case companies, have the potential to contribute to the making of pollution halos, but need to

take further action to ensure proactive performance in the full value chain of their products. To encourage more corporations to implement environmental policies even beyond the national law, it is also essential that the authorities take an active role in enforcement, pressure and guidance.

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1. Background and Objective of the Study

India has during the last years stood out as one of the fastest growing economies. The middle class is growing, and it is now estimated to consist of three hundred million by the Indian standard. The economic growth is mainly explained by a liberalisation of the Indian market that has led to extended foreign investments. India has especially distinguished itself within the global market of information and service sectors, but there has also been a tremendous growth within mass production.

Simultaneously, the growing urbanisation and industrialisation have led to environmental degradation, leaving the country in a state amongst the worst in the world. Many of the country's rivers have high toxicity levels, and the ground water is increasingly polluted and saline. Water shortage, inadequate sanitation, deforestation and soil erosion are some of the environmental constraints present in many areas. Environmental constraints usually have the largest affect on poor people and those who depend more directly upon natural resources, such as farmers. The Indian middle class has grown during the last decade, but 40 % of the Indian population still lives even below the global poverty line.[1] It is this group who will be distressed most fiercely by environmental degradation.

Transnational corporations (TNCs) have often been a subject of controversy in the debate on environmental degradation in developing countries. They have been characterized alternatively as contributors to environmental degradation, a hindrance to the implementation of environmental regulations, but also as contributors to improved environmental standards. The role of TNCs' environmental policies and performance is a relatively new concern; only limited research has been conducted, and little is known for certain. It is therefore useful to do further studies to identify the factors influencing corporations' behaviour, and the areas in which host countries should concentrate their policy efforts to ensure improved environmental performance amongst TNCs, its suppliers and customers. Further empirical studies could help design better policy frameworks at both the national and international level, and to get more insight about the best practices. Ideally, this could help prevent environmental degradation while preserving these countries' ability to pursue economic and social objectives.

[1] http://go.worldbank.org/DQKD6WV4T0, downloaded 8th May, 2009.

The factors which influence TNCs' environmental performance are also the focus of this thesis, through a case study of Scandinavian companies established in India. I chose to limit the study to Scandinavian companies for practical reasons, but also because of personal motivation. Being a Scandinavian, I consider it as interesting to get better insight into how my own consumption of Scandinavian commodities can have an impact on the Indian environment. Currently Scandinavian companies constitute a minor share of foreign investments in India, but it is predicted that India will become a prominent location for Scandinavian trade and production in the years to come, which makes this an area of relevance. During my fieldwork I visited four Scandinavian companies, all within different sectors: oil and gas drilling, and paint, textile and plastic production. My academic background does not provide the tools to study and verify the extent to which the case companies pollute (or not). What I can and did study is how the context influences attitudes, perceptions and actions, and the overarching research question of the study is:

> What is the push and pull factors making TNCs implement environmental policies and even go beyond national requirements?

I approach the topic in both a theoretical and empirical way, in which the first part of the thesis describes and discusses TNCs' potential environmental role and the Indian authorities' ability to enforce the government's own policies, with reference to the hypotheses of pollution halos, pollution havens and the "soft state" debate. In the thesis' second part, I explore the research question through the views and experiences of the four case companies. Finally, I discuss the empirical findings and analyse the theoretical theories in this context.

The purpose of this first chapter is to describe and state the reasons for my choice of methods, selection of case companies and sources. Finally I reflect on the challenges presented by the thesis, before I present the structure of the thesis.

1.2 Case study methodology

A case study is explained on a theoretical level as an empirical study of a contemporary case or phenomenon, and how it is influenced by its real-life context (Denzin & Lincoln 2005: 444). Case studies investigate, describe and analyse the case's activity, function and attitudes. It is presumed that these factors are influenced by the context of the case, and it is therefore important to also describe the environment the case operates in. The intention of this study is

to describe and analyse the case companies' environmental management, their function in the implementation of environmental policies and their attitudes towards this process, but also to focus on the contextual factors. The broader historical and political situation is important to form the context of the case, and factors such as environmental regulation and investment climate are examined more theoretically in chapters 3 and 4. Case studies can be divided into single and multiple case studies. As the name indicates, a single case study examines only one unit, while there are two or more units in a multiple case study. I have done a multiple case study of four companies. I chose to have a multiple case study to get a better understanding of tendencies rather than distinctiveness.

In a case study, both qualitative and quantitative research methods can be employed, whereas qualitative methods are the most applicable for studies emphasising the relationship between the subject studied and its day-to-day context, rather than verifying a hypothesis. Hence, I found qualitative methods to be the most relevant approach for my study. Various techniques can be used in qualitative research, and I gathered my empirical data by conducting semi-structured interviews.

1.3 Anonymising

One of the case companies did not want their company name to be used in the thesis. For a researcher, it is very important to safeguard informants' anonymity according to their wishes. I have therefore anonymised the name of all the companies and informants quoted in the thesis. Even if only one of the companies expressed a wish for anonymity, I chose to anonymise all of them in order to create a level ground. The intention of the study is not to expose companies and judge their performance, but to illuminate and study their experiences and attitudes. Keeping the companies and informants anonymous also helps to direct the focus toward the overall subject, rather than toward the individual companies. This also prevents any potential prejudice against the companies.

I have given the companies reference names based on the nature of their activity in order to make it easier to distinguish them from each other: Paint Company, Textile Production, Textile Retailer, Offshore Consultants and Plastic Company. I refer to the informants by the titles of their positions, and I hope none of them will be offended by the choice of reference names and titles.

1.4 Selection of case

Initially, I planned to study only Norwegian companies in India, and started to search for possible cases. It turned out, however, that a large share of them was involved in sectors that are not the most relevant in relation to the environment, such as the service and information technology sectors. Knowing that there are many Swedish companies in India, I chose to extend my study to also include companies from Sweden and Denmark. The Scandinavian countries have a fairly similar business culture and policies, and no challenges due to national differences occurred during the study. I went on looking for registers of relevant Scandinavian businesses established in India, and sent the headquarters a request by e-mail and spoke with several of them on the telephone. Some did not reply, and some replied, but did not not want to participate as they considered their share in the activity in India too small to be considered as "their own". Amongst the six companies that did want to be part of the study, I decided to keep only four of them due to practical logistics. The chosen companies are based in what can be considered as South India; Daman, Mumbai and Pune in Maharashtra, and Tirupur in Tamil Nadu. They are involved in different activities, three of them in the industrial sector, and one in the offshore sector. The three industrial companies are involved in the production of paint, textile products and plastic household products. Moreover, the character of the Scandinavia–India link also varies, as Offshore Consultants is a fully Scandinavian owned TNC with its headquarters in Mumbai; Paint Company is also a Scandinavian TNC and has established one of its many affiliates in Pune; Textile Production is owned by an Indian, but are a cooperative and are a production unit of a Scandinavian company: Textile Retail; and finally, Plastic Company is one of many suppliers of another large Scandinavian retailer. As a retailer, their business is to establish warehouses with products of a certain style, usually from several different and temporary suppliers. They have no ownership in the suppliers' production unit or activity. Some of the companies that turned down my request used exactly this structure as the reason why they did not want to participate, and I was very happy to be given the opportunity to get more insight into a relationship of this nature.

1.5 Data sources

The fieldwork was carried out during March and April 2008. During my fieldwork I conducted interviews, and these are the primary source of the study's empirical part. This is supplemented by theory and by more general information gathered from secondary sources.

The intention of employing several sources is to illuminate the various factors that have influenced the case, as well as to better secure the reliability of the information.

1.5.1 Primary source

My primary source is semi-structured interviews. A semi-structured interview has some kind of planned structure, usually in form of an interview guide. In contrast to structured interviews, where the questions and sometimes multiple-choice responses are fixed, in a semi-structured interview, one has the opportunity to let the conversation flow more freely and create its own direction. I chose to have a more or less standardised interview guide that I adjusted slightly according to the character of the company. During the interviews, some questions turned out to be irrelevant in some cases, while they had to be further developed in other. I started off the interviews by asking the respondents about the company and production in general, before I turned the conversation towards the issue of environmental policies. During the interviews I let the interviewees talk freely about the different topics, and led them towards the issues I wanted to investigate by asking general questions at first and more specific follow-up questions when a natural opportunity presented itself. I wanted them to decide the direction of the interview to the greatest extent possible, as I was interested to see what they stressed and emphasised without becoming too influenced by my questions. A problem with semi-structured interviews is that there is always a possibility that the interviewee becomes influenced by the situation and the interviewer. The context can also influence both the reliability of the answers and the interviewees' openness. I experienced that people were more relaxed and talked more openly about sensitive issues like corruption during the informal situation after an interview, and while alone, rather when several people were present. All in all, I have sixteen informants[2], and the ways in which they shared their experiences with me vary to a great extent; some talks took place during a tour around the plant, some during the journey back and forth to the plant, some were with others present, some were informal over several days, and some more formal with only the interviewee and myself present in an office. All of the talks and interviews gave me valuable information and insight, but it is especially four of the more formal interviews that I extensively refer to in the thesis. Two of these were tape recorded, and two were not, as the setting did not allow it. In retrospect I have really seen the value of recording interviews. The recorded interviews do not

[2] See appendix for an overview of interviews conducted.

show signs of being influenced by the tape recorder, and it makes it easier to go back to the setting and make sure my interpretation is correct.

The four interviews I have used the most are with the operational managers and owners of the case companies. It was actually they who worked most closely with the implementation of environmental policies, except in the case of Textile Production. Here, another employee had the main responsibility for the day-to-day environmental management, and they were both present during the interview. The operational managers and owners were all men of Indian origin, except the owner of Offshore Consultants, who was Scandinavian. They spoke good English, so language was never a barrier. Most of the employees spoke Hindi, Marathi, Gujarati or Tamil, so if in addition I had wanted to study their implementation of social responsibilities, such as working conditions for the employees, I would most definitely have struggled with a language barrier and all that comes with it. However, in this case I was interested in attitudes of the ones responsible for decision making and implementation.

1.5.2 Secondary sources

To create the backdrop and context of my case study, I found it necessary to clarify some relevant discussions, historical political developments and today's situation. This is included in the three following chapters, which are of a theoretical nature, based on secondary literature. The secondary literature applied here consists of academic books and articles, and several internet sources. It was especially when describing the current situation, such as the scope of foreign direct investment and information on Scandinavian activity in India, that I found it necessary to use internet sources. These have more updated information, which would also be difficult to access through other sources for a researcher situated in Norway. The internet sources are mainly official sites like the Embassy of Sweden and the Indian Ministry of Commerce and Industry; and I regard the information published there as reliable. In some instances I discovered discrepancies in some statistics. The differences were caused by different definitions and categorisations, and were in some cases due to hidden statistics. The intention of referring to statistics in this paper is not to verify or prove anything, but simply to illustrate a ruling tendency. Therefore I still found the statistics functional despite the discrepancies.

Some of the academic books and articles used can be criticised for being old, as several of them are date from the beginning of this millennium. Despite the lapse of time, the

discussions and arguments presented in the literature are still as alive and relevant today as they were then. Many aspects of the topic are not different today that they were seven years ago. Moreover, the literature available on the topic is limited, and thus I chosen to use the available sources.

1.6 Reflections on the thesis

As this is a study of only four companies, the findings are not adequate to base any generalisations on, but that has never been the intention, and rarely is in case studies. A limitation in my primary data is the absence of the companies' counterpart: the views and experiences of the authorities. Nevertheless, I did get, by chance, the opportunity to speak with one inspector in Maharashtra, but the information I managed to get within the five minutes I was given is limited. Throughout the six months prior to fieldwork, I tried to set up some appointments with Indian governmental institutions such as the State Pollution Control Boards. But as I lacked a contact as my gateway in, they could not sign me up for an appointment unless I showed up in person. Once I was there, they wanted to meet with me, but like most officials they have busy schedules, and no appointments were available until after my fieldwork. Hence, this is the views and experiences of the Scandinavian TNCs. It is not a complete report of the situation, but a study of the attitudes amongst one of the parties. In this perspective, the analysis can become one-sided when the authorities are not given the opportunity to meet the critic. However, instead of conducting a discussion between two parties and winding up with inconclusive results, it is more interesting to hear one party out. Focusing only on one party makes it possible to highlight what they consider as challenging, and hence get more insight into what areas should receive focus in order to improve pollution prevention measures.

The last thing I want to point out is a coincidence in the selection of case companies for this thesis. During my search for case companies, I was turned down by several. The reason might simply be that they did not have the time or interest to participate in this kind of study, but it is striking that all the companies that accommodated my request are proactive and represent best practice in their environmental management. I have no grounds for, and it is not my intention either, to render suspect the companies that declined my request, but I find it essential to emphasise that the case companies do not necessary represent the average Scandinavian company with business relations with India.

1.7 Structure of the thesis

The title of the thesis is *"Implementing Environmental Policies in India– a case study of four Scandinavian TNCs"*. My point of departure is the discussion of TNCs' potential environmental role in the context of pollution halos and havens. The function of chapter 2 is to make a backdrop to connect my findings to a general discussion, before I narrow down my focus to India in chapter 3. To be able to discuss the implementation of Indian environmental policies, it is necessary to have a short overview of those policies and their development during the twentieth century. After an introduction to the development of Indian environmentalism and environmental law and policy, I discuss their implementation and enforcement in the context of the "soft state" debate. The discussion of TNCs and the environment in India is interesting and important, especially since India has seen a severe increase in both TNC investment and pollution over the last two decades. The reason India has become such an attractive location for investment is relevant to this thesis, both as important background and in the discussion of whether TNCs' motivation to relocate is related to environmental regulations. Chapter 4 will therefore address the development of the Indian investment climate and the scope of foreign direct investments in India, emphasising the Scandinavian investments. Chapters 2, 3 and 4 cover the background information and discussions preliminary to my study. Chapter 5 is a presentation of the four case companies I visited during my fieldwork and the interviews I base my findings on. Chapter 6 presents and describes my findings: the case companies' experiences with the process of implementing governmental and corporate environmental policies. In chapter 7, I analyse the statements from chapter 6 and discuss the findings in the context of the previously examined discussions of pollution halos, pollution havens and the soft state. Finally I summarize and make my concluding remarks in chapter 8.

2. TNCs – a source of pollution or a solution?

It has often been assumed that transnational corporations (TNCs) investing in less developed countries take advantage of these countries' more relaxed environmental regulation. The debate about the TNCs' environmental impact and responsibility in less developed countries arose in the '70s, when environmental regulation was tightened up in the USA. Industry protested against the regulation by threatening to relocate to countries with less stringent regulations. Some went through with it, and it was a prevailing perception in the '60s and '70s that many of these companies transferred obsolete and environmentally harmful activities and technology to developing countries (Chudnovsky and Lòpez 2002: 58). Investments by large international companies can contribute to creating economic growth and new jobs, which give them political power beyond their role as commercial agents. Their important role in the global market has given them more structural power and more possibilities of influencing the formulation and implementation of development strategies in countries hosting TNCs (Ruud 2002: 57–68). Environmentalists argue that this kind of power in the hands of commercial agents can create a situation where countries with fewer environmental regulations will attract the most polluting industries and companies.

The attitudes towards and amongst TNCs have changed significantly since the '70s. From reluctantly dragging their feet in the '70s and '80s, TNCs started to cooperate with the environmental authorities, and even to formulate their own strategies in addition to the already existing formal laws. Rather than exacerbating pollution, neo-liberals argue today that increased foreign direct investment (FDI) can improve the environmental situation in developing countries, as companies from OECD countries generally employ newer and more environmentally sound technology and management than the local producers (Ruud 2002: 12–15).

Despite the change in attitudes towards TNCs, their role in the host countries' environmental situation is still much debated. Many examples and cases supporting both arguments have been published, but little statistical evidence or detailed studies of the TNCs' actual performance are in fact available. The purpose of this chapter is to examine the general discussion about TNCs' environmental role in host countries, in order to create the context of my further study of four Scandinavian companies in India. The discussion's opposing views

can be traced back to the hypotheses of pollution havens and halos and I will use these hypotheses to describe the discussion's oppositional stands.

2.1 Pollution havens

Pollution havens, industrial flight and *race to the bottom*, are expressions describing the theory that polluting industry relocates to other countries, mainly less developed countries, in order to escape the cost of environmental control.[3] Many less developed countries have a lower standard of environmental regulations, and in combination with a strong will to attract FDI, it can lead to a situation where enforcement of environmental regulations is taken lightly. In order to become the most attractive location to foreign investments, competing countries might successively lower their regulations and set off a *race to the bottom* towards the creation of a pollution haven.

The extent of the authorities' enforcement of environmental regulations is fundamental in the creation of pollution havens, but it is also necessary to keep in mind the TNCs' motivation for establishing themselves, and their potential environmental impact. TNCs are always seeking to increase their comparative advantage, and there are three main factors which contribute to this when companies relocate: access to new markets, access to resources, and efficiency-seeking (Chudnovsky and Lòpez 2002: 47). All of these are aspects which an investment-eager government can adjust to facilitate TNCs. By lowering taxes and reducing subsidies on domestic products, the government increases the TNCs' access to the host country's market. In an environmental perspective, a company does not have a direct negative impact on an environment simply by establishment in a new market. However, there are those who argue that consumers in less developed countries have less environmental awareness, and are not willing, or able, to pay more for a product "just" because it is produced in a more environmentally friendly way. The two other factors; access to resources and efficiency-seeking, have a more obvious and direct potentially negative effect on the environment, whereas the authorities' restrictions, or lack thereof, determine the extent of this. Activities based on extraction of natural recourses, like mining and logging, have a large impact on the surrounding natural environment, especially if they are done in a large scale, as they usually are with TNCs. Finally, if increased efficiency is achieved by avoiding environmental regulations, such as waste treatment, it would contribute to the establishment of pollution

[3] The theory includes all corporate social responsibility such as labour rights and safety. Due to the aim of the thesis, I am only taking the issue of the environment into account.

havens where financial profit is made at a cost to the environment. Thus, the motivation for relocation and the character of production is influential in the creation of pollution havens. A company that establishes itself in a country with the interest of getting access to natural resources is more likely to have a negative impact on the host country's environment, than a company only aiming for the domestic market (Chudnovsky and Lòpez 2002: 47). While entering a new market is not in itself directly environmentally harmful, a combination of a relaxed enforcement of environmental regulations and less environmentally aware consumers enables the industry to lower its standards. For efficiency-seeking companies, the cost of pollution control is an important factor in their environmental practice, but regardless of the motives for relocation, governmental actions and policies play a very important role, both on TNCs' willingness to relocate, and to their environmental performance, through subsidies, restrictions, infrastructure and legal framework, and then especially the enforcement of the latter (Ruud 2002: 59–60).

Empirical cases supporting the hypothesis of TNCs relocating to a less developed country to take advantage of relaxed environmental legislation are available, but there is limited data to prove the existence of such havens. Hansen *et al.* (2002) conducted a study of the existing literature on the issue, as well as carrying out a survey on the environmental management policies of 163 TNCs' affiliates in Asia. None of the affiliates responded that relaxed environmental regulation and savings on environmental costs was the main reason or even a cause for investing in the Asian country. Some might hesitate to answer such a question truthfully, but the findings are, according to Hansen *et al.* (2002: 26), supported by other studies. An explanation to this might be that most decisions are not made on the basis of environmental criteria, but that other determinants, such as access to new markets, low labour costs and well developed infrastructure, are factors considered more economically important.[4] This can be illustrated by an interview I did with a Danish steel company established in India. The chairman explained why they relocated their production to India four years ago. Their customers had made it clear to them that their prices were considered too high compared with other alternatives, and that they had to find a way to lower the cost if they wanted to keep the deals. In order to meet the customers' demand for lower prices, they sought the solution of outsourcing to South Asia to lower the cost of labour. The choice landed on Bangalore in

[4] Another way of attacking the discussion is following Zarsky (1999), who claims that industrial migration does not exist, since environmental regulations are universally too low to be a point of speculation. http://www.olis.oecd.org/olis/1998doc.nsf/LinkTo/NT00002C96/$FILE/01E91439.PDF, downloaded 9th May, 2009.

India, mainly based on the fact that the English skills and level of education were better in India than in other alternative countries. The location of Bangalore, originally a hill station with a dry climate, reduces the threat of rust while storing the steel. Moreover, as the city has developed into one of India's busiest hubs, a Danish trade office is located there which could help them during the time-consuming bureaucratic process of establishment. They were recommended to hire a Dane to be the general manager at the affiliate, but as a Danish director would demand a higher salary and financial support for family and housing, they choose to hire one of the many well-educated Indians. Based on the chairman's description of the process, the motivation to relocate was not to avoid strict environmental regulations in Denmark, but to save money on labour cost. India was chosen because of the language skills and high level of education, and Bangalore was chosen based on climate and facilitating infrastructure.

Following the question on *why* they relocate is *how* they manage the environment after relocating. Even though reluctance toward environmental regulations is not the motivation for relocation, it still might be taken advantage of. Besides, strong focus on one factor, like financial profit, may lead to ignorance and neglect of another, such as environmental considerations. A much used example to illustrate the environmental impact, to which one-sided focus on financial profit may lead, is transfer of outdated technology and methods that are no longer approved in the TNCs' home country. This was the case in the most mentioned industrial accident in India; the Bhopal tragedy. The US-based corporation Union Carbide had a pesticides plant in the outskirts of the city of Bhopal. One morning in 1984 a toxic gas leaked from the plant and out to the surrounding shantytown occupied by ecological refugees; and within minutes an estimated 10,000[5] people died following exposure to suffocating fumes, and more than 50,000 were injured (Gangully and DeVotta 2003: 178–179; Gadgil and Guha 1995: 81) According to Hesselberg (2000: 218) the technology and maintenance was of a lower standard than in equivalent production in US, and it illustrates how important it is to not neglect aspects of a business in the striving of creating economic profit.

As discussed above, the motivation for establishment does not necessarily correlate with the actual performance. In cases where the motivation of relocation is not based on environmental considerations, the lack of focus on environment may actually lead to increased pollution. On

[5] The numbers differs due to insufficient registration at the day of the accident. These numbers are an estimate based on the numbers from the sited sources.

the other hand, in the search of efficiency, efforts to reduce consumption of resources might lead in the opposite direction. This leads me to the opposing view on TNCs' potential role in the environment: the hypothesis of pollution halos.

2.2 Pollution halos

In stark contrast to pollution havens, the hypothesis of pollution halos states a confidence in FDI's ability to bring about significant improvements in environmental performance in developing countries. The ways in which it is believed that FDI and TNCs can be vehicles of improved environmental performance is mainly through transfer of new and better technology and environmental management of a higher standard.

2.2.1 Transfer of technology

The first of the two dominant arguments of the pollution halo hypothesis is that TNCs' can contribute to technology transfer to less developed countries. State-of-the-art technology is more resource-efficient and thus more environmentally sound. The large TNCs are considered by many to be the leading actors in the development of new technology that the less developed countries need in order to move from traditional primary production activities, like farming, to becoming a part of the more advanced production activities of the global market. Foreign direct investment, establishment of TNCs' affiliates and joint ventures are the most direct way of transferring technology, either by investment in new technology for the affiliate, or by transferring the ones used in their country of origin (Chudnovsky and Lòpez 2002: 43–44).The latter instance will only support the hypothesis if the technology is of a standard above the regional average. In similarity to the discussion of pollution havens and the Bhopal tragedy, a one-sided focus on economic savings can lead to the neglect of other concerns. In the Bhopal case, technology and methods no longer approved in the country of origin were employed; however a one-sided focus on economic savings can hinder the transfer of more environmentally sound technology, and thus hinder the creation of pollution halos. When asked about the extent of technology transfer, the chairman of the Danish steel company explained that when constructing the plant and relocating the production to Bangalore, they transferred the old machines from their production unit in Denmark and supplemented them with some new ones bought in India. By using the machines they already had, they saved money not only on labour, but also on technology expenses. The labour-intensive part of the production is executed in India, while they have kept the more advanced activities in

Denmark. This serves as an example of both successful and failed technological transfer. The machines maintain a standard that complies with Danish policies, and assuming that these are not lower than those in India, technology of fairly good quality is executed. However, when these machines break down, the company management plan to replace them with something available on the Indian market. This implies that the difference between the transferred technology and the technology already available in India is of little significance. Moreover, the advanced part of the production and technology was kept in Denmark.

2.2.2 Transfer of environmental management

The second focus area of the pollution halo hypothesis is environmental management. Good environmental management is crucial in improving environmental performance and in the constructing of pollution halos. It is increasingly common nowadays for TNCs to formulate their own policies on the corporation's social responsibility, often referred to as Corporate Codes of Conduct, or Health, Environment and Safety Strategy. However, to turn policies into an active environmental management approach, it is essential that they are implemented. All TNCs are in theory obliged to comply with the host country's national laws and regulations, and if the TNC has formulated corporate policies, these are also to be followed regardless of where the affiliate is located. The corporate policies usually have a standard equal to, and sometimes higher than, the regulations in the country of origin. There are two particular reasons why most TNCs choose to follow the same standards wherever they are located; the first is the impracticality of operating with two sets of standards. It is easier to comply with a higher standard of environmental practice than that demanded in the host country, if these routines are already implemented and incorporated by the home-based units. It would actually require more work to adjust downward, than what could be gained by doing so. A second reason for TNCs to keep a higher level of environmental standards is the level of scrutiny TNCs are exposed to, and their desire to preserve their international reputation (Chudnovsky and Lòpez 2002: 48–52). Image is especially important to TNCs with a well known brand, and the increasing number of green labels and certifications mirrors a greater concern for environmental and social responsibility as a part of the construction of image. TNCs generally keep a low environmental profile, as exposure increases their vulnerability. An example from my own fieldwork is that one of the case companies wishes to remain anonymous. As a well-known company in Europe, they feel that their reputation is a vulnerable point, and are a bit reluctant to be discussed by external actors. They have a large team working solely on corporate social responsibility, and are more proactive than many TNCs. However, some

argue that if a company announces it has an active approach towards corporate social responsibility, it is more likely to be "caught red handed" than if it does not take any such measures, and thus avoids publicity in relation to these issues. This can make companies abstain from creating corporate social responsibilities, but it is still important to monitor the ones which do claim to be environmentally advanced, to prevent so-called "green washing". In cases where there is a significant gap between the environmental standards the management claims to have, and the actual performance, it is called "green washing." There have been cases of companies publishing information on their corporate policies, merely for the sake of public goodwill, in which the published information has been selective and formulated in a vague style difficult to verify. As long as the adopted policies do not provide reliable monitoring, it is to be considered green washing (Ruud 2002: 118–119). Most firm-specific policies are formulated centrally by headquarters, and are usually of a very general formulation. To ensure implementation and reliable monitoring, the policies should be specified and include set goals. In order for environmental management to contribute to the creation of pollution halos, it is decisive that the corporate policies are of a high standard both in theory and especially in practice.

2.3 Discussion of the pollution haven and halo hypotheses

Both environmental management and transfer of technology are important in the pollution halo hypothesis, but in order for it to have real impact on the environmental situation in the host country, knowledge about how to respond to environmental constraints in the most efficient way is decisive. When speaking of environmental management and implemented measures, the focus is usually on so-called end-of-pipe solutions rather than prevention and precaution. The end-of-pipe approach is, as Chudnovsky and Lòpez (2002: 44) define it, "(…) based on the identification, processing and disposal of discharges or waste. It is thus a corrective approach, which tries to control the pollution after it has occurred." Pollution prevention measures include amongst other things: process modifications, change to other raw materials, employing available technology, technological innovation and recycling. Pollution prevention can be beneficial both economically and environmentally, as preventive measures are in some cases less costly than end-of-pipe solutions such as effluent treatment plants. When pollution prevention improves the environmental performance without lowering the company's competitiveness, but rather increases it, it is called a "win-win solution". Win-win situations can be a result of an "innovation offset" when innovations in production process not

only make production more competitive through higher productivity, lower costs and improved quality, but also less polluting. However, TNCs with environmentally sound technology and management practices might just create an island of environmental excellence in a sea of dirt.[6] If the TNCs have no requirements to monitor, nor carry out any monitoring of, their suppliers, sub-contractors, service providers and customers, the improvement in environmental performance will be limited to that single plant. Some TNCs subcontract the production of some components and parts of the production to other producers; others outsource the final part and consider themselves merely as local distributors. In this way they liberate themselves from responsibility for the environmental conditions their products are produced in (Chudnovsky and Lòpez 2002: 56–57). This can be considered as a kind of green-washing and it can certainly be considered a practice that does not contribute to an improvement of environmental performance in the less developed countries. Requiring and supporting training of the suppliers' and customers' staff in pollution prevention technology and waste minimization, is a way for TNCs to expand the pollution halo (Chudnovsky and Lòpez 2002: 45–48).

Although the evidence of the performance of TNCs is mixed, it seems to be the case that the TNCs have a potentially important role in transferring technology and management to less developed countries hosting TNCs. However, a few more limitations are to be considered. The performance of an affiliation and its ability to serve as a vehicle of environmentally friendly practices depends on several factors, such as the nature of the sector, mode of entry, age of the factory, country of origin, strategies of parent company and affiliate, and practices and management routines. Besides, good corporate environmental policies do not necessarily result in good environmental performance. TNCs aiming to implement a firm-specific policy might experience constraints in actually carrying it out in the political, social and economic contexts of the host country. Country-specific characteristics like infrastructure, environmental regulation and enforcement, NGO activity, consumer awareness, labour organisations, local communities, relationship to suppliers and home country regulations can influence the planned implementation (Chudnovsky and Lòpez 2002: 42, 59). According to Chudnovsky and Lòpez (2002: 53), there is little statistical evidence available, but it seems that TNCs in certain circumstances, at least in theory, have the potential to contribute to improving environmental policy and performance through transfer of management practices

[6] Expression from the article *"Environmental Management of Transnational Corporations in India – are TNCs Creating Islands of Environmental Excellence in a Sea of Dirt?"* by Audun Ruud, 2002.

and more environmentally sound technology. TNCs with a successful environmental track record can act as a showpiece on how environmental issues can be handled to inspire other companies to follow their lead.

2.4 Environmental strategies

It seems obvious that TNCs have the potential to create both pollution havens and halos, but this depends on several factors, while I consider the company's environmental strategy as decisive. Environmental strategy is the approach a corporation has to environmental issues, either chosen deliberately or not, and differs from environmental management as it applies not only to companies with an active environmental management. A very general way to classify the numerous strategies is the three categories of reactive strategy, compliance strategy and proactive strategy (Sæther 1998: 176).

Reactive strategies have historically dominated the industrial sector and companies with such a strategy try to avoid meeting environmental requirements. Hesselberg (2000) has several examples of the use of this strategy in India; effluent is discharged during the monsoon or at night when it is less likely to be discovered; inspectors are bribed; production is relocated to other states with less regulation, and effluent treatment plants are turned off at night and on the weekends, when the inspectors are off duty. However, this applies not only to companies in less developed countries. In 2005, a cold storage plant discharged 1000 litres of water containing ammonia in a river in the east of Norway.[7] Nature can handle small amounts of ammonia discharge from, for example, house cleaning, but this kind of amount is usually stored in pressurized containers specifically made for this purpose. The incident caused instant environmental damage; the day after the discharge all the fish in the remaining three kilometres of the river were dead. The company was given a fine of 1.2 million Norwegian kroner. This illustrates a reactive strategy of the hidden type, but companies can also execute active reactive pressure by creating academic "think-tanks" and alliances with other companies to perform lobbying to influence politicians (Beder 2001: 247). Nevertheless, the most relevant reactive strategy in relation to this thesis is the strategy of relocation as a means of avoiding stricter environmental regulations, which has already been discussed in relation to the creation of pollution havens. The compliance strategy is not an active choice or strategy of

[7] *Miljøkrim* no. 1, 2008, vol. 11. published by Økokrim [Economic crime]. Also available electronically at: http://www.miljokrim.no/nor/tidligere_utgaver/1_april_2008/artikler/utslipp_av_ammoniakk_ammonium_salmiakk_eller_gjoedsel, downloaded 10th May, 2009

the company; rather it is the result of the authorities' successful strategy. A compliant strategy means that the company does as it is told by the authority and complies with what is required by it. This is by far the most common strategy. Finally, companies with a proactive environmental strategy implement measures to prevent pollution beyond what is required of them.

What drives TNCs to implement compliance and proactive strategies? Surveys of environmental management usually point out that governmental enforcement of regulations is the main determinant for companies to implement environmental management measures and corporate self-policing. Sticks, carrots and sermons are the official political instruments available to make the companies behave more environmentally friendly (Ruud 2002: 12). In the US, uniform and detailed standards have been emphasised, and companies can be sued in case they do not comply. This has created a more hostile relationship between business and government, than in Europe where the business is involved in the process of setting standards and consensus prevails. However, an open political system and such flexible implementation processes make the issue of lobbying more present (Ruud 2002: 92–94). Besides governmental enforcement, market forces like "green markets" and consumers' environmental awareness, can influence TNCs' choice of environmental strategies. Even more powerful are demands from the financial market, like banks, insurance companies and investment funds (for example, the World Bank), which may require environmental assessment and performance information from companies seeking access to capital (Chudnovsky and Lòpez 2002: 53). However, some argue that most companies operate with two faces; one which claims to be environmentally proactive, and a second one which only sees the potential of economic profit (Frankel 2001: 267). However, the opinion on combining economic growth and environmental considerations is becoming more positive. The relationship between minimising environmental constraints and maximising economic gain can be very close, and the two are not necessarily incompatible as illustrated by the discussion of technological innovation in the creation of pollution halos.

2.5 Summary

A company's environmental strategy is decisive for its potential impact on the environmental situation in the host country, and thus to the creation of pollution havens or halos. Companies with reactive strategies try to avoid environmental regulations either in a disguised way or openly. An example of the latter is lobbying and creation of think-tanks, while relocating in

order to take advantage of more relaxed environmental regulations is a disguised reactive strategy contributing to the creation of pollution havens. Companies with a cooperative strategy which simply comply with national laws and regulations, will neither contribute to the creation of pollution havens nor halos, unless the regulations complied with are lowered in order to attract the investment. The results of a proactive strategy can on the other hand lead to the development of a pollution halo where environmentally sound technology and environmental management are transferred to the affiliation in the host country as well as to suppliers and customers. Different factors, such as economic concerns, influence the choice of strategy, but according to Hansen (2002) there is not much literature on what drives TNCs to adopt certain practices. It should also be kept in mind that there is not always a correlation between the adoption of environmentally friendly policies and actual environmental performance (Chudnovsky and Lòpez 2002: 50; Hansen 2002: 20).

To answer the posted question whether TNCs are a source of pollution or a solution to it, I must conclude that they can be both. They can be a source of pollution as most industries have some kind of impact on the environment, whether by exploitation of natural resources or discharge of effluent. Nevertheless, many TNCs employ advanced technology and methods that are more resource effective and reduce the impact on the environment. Thus, they can also be a source of solutions. Hansen (2002) emphasises that the studies available do not offer any reliable evidence to support the pollution halo hypothesis or the pollution haven hypothesis, and that it is not possible to conclude that TNCs either contribute to a greening of the developing world, or to industrial flight. However, without concluding what role TNCs actually have, at least it seems obvious to me that TNCs have the opportunity and the potential to contribute both to the creation of pollution havens and halos. A study on the factors that motivate and influence the companies' behaviour could help inform authorities as to where they should concentrate their policy efforts, since the hope would be to avoid the creation of pollution havens, and to facilitate pollution halos. We do know that governmental enforcement of regulations is one of the main determinants for companies to implement environmental management measures (Ruud 2002: 12), and this will be further discussed in the following chapter. Following the general discussion on TNCs' environmental role, the rest of the paper will deal with the situation in India. The next chapter will examine efforts made by the Government of India with respect to environmental regulations.

3. Indian Environmentalism, Policies and Implementation

In the previous chapter, I discussed transnational corporations and environmental regulation on a general level; I will in this chapter narrow my focus to India. With respect to pollution havens and halos, the state's environmental strategy is decisive for the outcome; and in order to study TNCs' relation to environmental policies in India, I find it essential to describe the development and formation of the Indian environmental law. The first part of this chapter briefly describes the broad lines in the development of Indian environmental law and environmentalism in India during the twentieth century. I have combined these two as I find it interesting to examine whether or not the views and efforts of the Indian government coincide with environmentalists' attitudes. Secondly, I present a short description of what the policies mean in practice for industry, which is relevant in forming the context in which my case companies operate in. In relation to the previous discussion on pollution havens, India is considered by many as unable to implement the laws and policies they have enacted. This notion is tightly connected to the "soft state" debate, which I will touch upon in the final part of this chapter.

3.1 Indian environmentalism and the development of environmental laws and policies

Similarly to the industrial revolution, environmentalism began in Europe and moved to the USA before it entered Asia. Environmentalism is not a fixed concept, but is always evolving influenced by its context. This also applies to Indian environmentalism, which has developed and changed throughout the years; and I will divide both development in environmentalism, as well as environmental policy, into four periods, with the main characteristics: the decades immediately before and after independence; the '70s; the '80s and finally from 1991 and onwards. In the early twentieth century, the main concern of environmentalists was about what economic development model independent India would follow. The Gandhian perspective prevailed amongst the environmentalists, and they were sceptical to an industrialisation following the same model of the West, and advocated small scale and traditional production (Guha 2008). Amongst the economists and politicians, socialism had a strong hold, and Prime Minister J. Nehru emphasised the importance of modern technology and heavy industry in the development and modernisation of the newly independent state.

The second period coincides roughly with the decade beginning in 1970, and is by many considered as the first and the actual beginning of Indian environmentalism and governmental awareness. The socialists considered the environmentalists anti-development in this period, but it was still a decade where many efforts were made to tackle the environment, at least in theory. In 1972 Stockholm hosted the first United Nations Conference to specifically deal with global environmental conditions – the United Nations Conference on the Human Environment (hereby referred to as the Stockholm Conference). 113 countries participated, and Indira Gandhi, who was the Prime Minister at the time, was the only state leader who spoke at the conference. Her speech has been referred to widely, as she so strongly stressed the interrelation between environment and poverty. This is illustrated in the following excerpt of the speech:

> "Are not poverty and need the greatest polluters? (…) How can we speak to those who live in villages and in slums about keeping the oceans, the rivers and the air clean when their own lives are contaminated at the source? The environment cannot be improved in conditions of poverty. Nor can poverty be eradicated without the use of science and technology. "(Divan and Rosencranz 2001: 32)

Further she focused on the importance of development to improve the environment of living:

> "The environmental problems of developing countries are not the side effects of excessive industrialisation, but reflect the inadequacy of development. The rich countries may look upon development as the cause of environmental destruction, but to us it is one of the primary means of improving the environment for living, of providing food, water, sanitation and shelter, of making the desert green and the mountains habitable." (Divan and Rosencranz 2001: 32).

She emphasised the importance of industrialisation to erase poverty, an prioritised issue above environmentalism in itself. This view, that it is almost unethical to discuss environment when people are starving, still prevails in many countries with a large marginalised population.

Prior to the Stockholm Conference, environmental concerns had been dealt with by different federal ministries, and suffered from a lack of consistency and coordination. All the countries that were planning to attend the Stockholm Conference were requested by the UN General Assembly to submit a report on the state of the environment. To prepare the Indian report, a Committee on the Human Environment was set up. The committee's reports made it clear that a national body which could coordinate and integrate environmental policies and programs

was needed to fill the void in the Indian planning process. Thus, in 1972, a National Committee on Environmental Planning and Coordination was appointed. The committee was mandated to plan and coordinate, but the responsibility to implement remained with the various federal ministries. The committee had fourteen members that were appointed for a two-year term, and most of the non-officials were specialists. After a five year period, the number of members increased to thirty-five, but the number of non-official specialists decreased. The committee became more bureaucratic and its political influence faded (Divan and Rosencranz 2001: 33, Kjellberg and Banik 2000: 36).

1973 marks a watershed for Indian environmentalism, and there are two movements initiated that year which are especially worthy of mention: Project Tiger and the Chipko Andolan (movement). Project Tiger was initiated and sponsored by the Government of India and aimed to protect the remaining wild tigers by establishing nine tiger reserves with a population of 268 tigers.[8] The project was partly a result of international pressure, while the Chipko movement was entirely indigenous. Chipko is the best-known environmental movement in Indian history, both nationally and internationally. It started in the Uttarkhand region in the Himalayas with a group of women using themselves as human shields to protect the logging of their woods, and to reclaim their traditional forest rights. Gadgil & Guha wrote in 1995 (p. 84) that "(…) the origins of Indian environmental movement can be fairly ascribed to that most celebrated of forest conflicts involving the Chipko movement of the Central Himalaya." One of the movement's leaders, Sunderlal Bahuguna, appealed to Prime Minister Indira Gandhi to ban green-felling, and in 1980 she ordered a fifteen-year ban of green felling in the Himalayas. The movement has also stopped felling in the Vindhyas and Western Ghats, and generated pressure for a better resource policy (Guha 1990: 160). The movements were the first of several environmental conflicts in the '70s and '80s which reacted to the effects of environmental degradation and overexploitation resulting from industrialisation. Both Project Tigre and Chipko have been fairly successful, but nonetheless most of the social action groups of the 1970s struggled to give visibility to problems of deforestation, soil erosion and water shortages.

The first environmental law passed was the Water Prevention and Control of Pollution Act in 1974, which was supplemented by the Air Prevention and Control of Pollution Act in 1981. As the names indicate, they include guidelines as to how water sources and air should be

[8] http://projecttiger.nic.in/introduction.htm, downloaded 23rd February, 2009.

protected and conserved; and they requested each state to establish a State Pollution Control Board (SPCB), coordinated by a Central Pollution Control Board on a federal level (Divan and Rosencranz 2001: 60–1). The Water Act of '74 stated five main functions of the SPCB, which are as follows: to plan programs for prevention and control of pollution; to encourage, conduct and participate in research on pollution; to inspect treatment of effluents and emission atn industrial plants; to prescribe, modify and review standards; and to organise the setting up of Common Effluent Treatment Plants (CETP) (Kjellberg and Banik 2000: 43). The SPCB control sewage and industrial effluent through consents to discharge, and today they have the power to close off a plant or stop the supply of water and power if the conditions of the consent are not complied with (Divan and Rosencranz 2001: 61). The SPCBs were established at different times throughout the '70s. Many states postponed their establishment, and the Central Government had to threaten them that they would not be given any more industrial licenses until they had implemented the act. The Tamil Nadu Pollution Control Board was established in 1982 as one of the latest (Kjellberg and Banik 2000: 11).

When the Indian parliament in 1976 passed the 42nd amendment to the constitution safeguarding the environment, it became one of the first countries in the world to do so. Two articles on environmental matters were integrated, one in the Indian Constitution's Directive Principles of State Policy, Article 48A (Chapter IV), and Article 51A in the Fundamental Rights and Duties.[9]

Article 48A: Protection and improvement of environment and safeguarding of forests and wild life.

The State shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country.

Article 51A (g): Fundamental duties.

It shall be the duty of every citizens of India to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures.[10]

[9] The former imposes the state's policy, while the latter deals with the somewhat similar responsibility of the citizen.

[10] http://www.constitution.org/cons/india/const.html, downloaded 29th August, 2008.

These amendments made the Indian constitution one of the few in the world with specific provisions for protecting the environment, and it is thus legally constituted that the state and the citizens are obliged to protect the environment.

As illustrated above, several initiatives were taken during the ’70s in order to improve environmental legislation and policy, but the actual changes beyond the theoretical and formal framework were of little importance. However, the following and third period of the development of Indian environmentalism and environmental policies is characterized by more actual and practical changes. The media was increasingly interested in environmental constraints; academic courses were initiated, and scientific studies on the effects of industrialization were conducted. Slowly the government responded to the environmentalists’ warning, but unfortunately it was too slow; in 1984 India experienced one of history’s worst environmental tragedies in Bhopal, when a cyanide gas leak in a pesticide factory killed and injured thousands. This became a turning point for environmental policies. The accident awakened the public, the press and hence the politicians, who accelerated work on environmental laws and strategies (Ruud 2000: 240). A flood of environmental groups arose all over the country. A Ministry of Environment and Forest (MoEF) was established soon afterward, and the Environmental Protection Act was passed in 1986 (Divan and Rosencranz 2001: 66). This Act strengthens the MoEF and the Pollution Control Boards by giving them authority to sanction offenders of the environmental laws. MoEF’s main responsibilities are planning, promotion, coordination and overseeing the implementation of environmental and forestry programmes.[11] The MoEF, CPCB and SPCB all have a responsibility to plan strategies and laws to better environmental protection. While MoEF oversees the national environmental policies, CPCB is responsible for initiating research, developing standards and regulations and coordinating activities in the states. It is also supposed to function as a consultant for state and central governments, as well as a mediator in disagreements between SPCBs. The SPCBs have the responsibility to make sure the standards set by the CPCB are complied with within the states. The SPCBs have the authority to formulate standards of their own, but they can never be less strict than the ones imposed by the CPCB (Seland 1998: 35).

There was an upswing in attention to the environment during the ’80s, but an upswing is usually followed by a regression. That has also been the case with Indian environmentalism since the ’80s. Environmentalism and governmental attention to the issue has experienced a u-

[11] http://www.moef.gov.bd/, downloaded 4th September, 2008.

turn, probably helped by some radical economical reforms in 1991. This is the fourth phase of the development of Indian environmentalism and environmental policies. The Indian economy has traditionally been based on self-reliance and strong state control. In order to stimulate economic growth and integration in the global market, the economy was liberalized in the spirit of free market capitalism, industrial regulation was reduced and export-oriented enterprise was encouraged (Divan and Rosencranz 2001: 37). The critics of the posted reforms, amongst them environmentalists, were considered as being anti-development, something that made both them and environmentalists quite unpopular (Guha 2006: 69). India experienced an economic upsurge in the aftermath of the reforms so great that it overshadowed the environmental concerns which had been present amongst politicians and the general public during the ’80s. Despite environmentalism’s falling popularity, the government did pass two important acts during the ’90s. In 1992, an amendment to the Environmental Protection Act from 1986 made annual environmental audit mandatory for all industries; and in 1995, The National Environmental Tribunal Act was passed. This act gives the court authority to impose responsibility on companies to compensate persons violated by environmental catastrophes and pollution (Kjellberg and Banik 2000: 40; Divan and Rosencranz 2001: 63).

According to Ramachandra Guha (2006: 70), one of the world’s leading historians, the environmental movement is still on the defensive and is a favourite scapegoat of politicians, industrialists and the consumer-driven media. However, awareness of the environment in relation to global climate change has gained new interest amongst the environmentalists, and maybe a fifth period is in progress.

3.2 Environmental legislation and the industry

Based on how much one is expected to pollute and how big the risk is for environmental accidents, industries in India are categorized into green, yellow and red categories. Companies in the red category are considered as the most polluting and resource intensive, while green companies are close to non-polluting. Before a newly established company can start production, they have to apply for a permit to operate. Red companies have to apply also for permit to establish, discharge and to deposit. The application has to include the estimated volume of effluent, emission and hazardous waste the company expects to produce, and the raw materials it expects to use. Further, the application must describe the company’s routines of waste handling and precautions taken against fires and uncontrolled discharge of

unprocessed toxic waste. The SPCB will respond to the application by giving them an *initial* consent to establish together with requirements as to what has to be changed in order to get a *final* consent to operate. After a certain time, an official will inspect the plant to see if the changes have been implemented in a satisfactory manner. If not, the company will get an extended deadline to do the necessary adjustments, but if the environmental policies are still not complied with, the SPCB has the authority to close the plant, indirectly by stopping the supply of water and power, or directly by physically closing the plant off.[12] When the requirements are complied with, permit is given to establish, discharge and deposit. The permit from the SPCB, together with grants from the suppliers of water and power, forms the basis for the authorities to issue an NOC – No Objection Certificate. This gives the company the go-ahead to start up production. The NOC is generally valid for fifteen years, while the permit to discharge has to be renewed every second year (Ruud 2001: 243).

There are eighteen categories of hazardous waste with specific regulations and requirements connected to them. The requirements vary based on the specific risks associated with the waste. Companies that produce waste included in one of these categories must regularly submit audits on how much waste they generate and how it is treated. Environmental auditing have been mandatory since 1992, and the Water Act and Air Act give the pollution control boards legal authority to request all the information they want on production. As mentioned above, they have the right to conduct inspections, take samples from waste and effluent and to levy sanctions if demands are not complied with (Ruud 2001: 242; Kjellberg and Banik 2000: 40).

3.3 The "soft state" debate

There has been great development in Indian environmental law and policies since independence, and they hold a fairly advanced and high standard. However, theory and reality do not always correlate. The environmental problems are rapidly accelerating, and the authorities seem to have problems maintaining the pace and scope of pollution prevention and treatment. There are several reasons for the rapid growth in emission and pollution, such as a growing middle class, but first and foremost it illustrates the gulf between policy intentions and what is actually carried out. The Indian environmental law provides a good basis, but the

[12] There is little literature available on the practicalities of the relationship between the industrial sector and the environmental authorities, so I have based this section on personal communication during my fieldwork in March 2008 and with associates at the University of Oslo.

implementation and enforcement of it is decisive for the environmental situation and for the performance of corporate companies in particular. In chapter 2, I discussed the pollution haven hypothesis; behind this concept is the perception of less developed countries as unable to implement and enforce their own laws and policies. In the Indian context this is largely connected to the "soft state" debate.

A soft state is a government that fails to address its problems in a satisfactory manner and allows itself to be affected by external pressures, whether by organizations, elite groups, businesses, lobbyists or other government institutions. It was the Swedish economist and sociologist, Gunnar Myrdal, who introduced the idea in his much debated book, *Asian Drama*, in 1968. Myrdal describes a soft state as a state that requires little of its citizens; what is required is not carried out; the inhabitants lack social discipline, and breaking laws and bending rules is a cultural norm. Said in Myrdal's (1968:277) own words:

> "The dichotomy between ideals and reality, and even enacted legislation and implementation, should be seen against the background that India, like other South Asian countries, is a "soft state". There is an unwillingness among the rulers to impose obligations on the governed and corresponding unwillingness on their part to obey rules laid down by democratic procedures. The tendency is to use the carrot, not the stick."

If India is a so-called soft state, this could explain the gap between policy intention and the actual results we see today, but what could be the source of this dichotomy? According to Myrdal, the foundation of an Indian soft state was established already in the late years of the colonial period. The Indian National Congress was a well established political party by the time of independence, and the party's radical intellectuals had in the pre-independent years worked progressively to get advanced social and economic resolutions accepted by the party and its supporters. These radical resolutions were accepted by the Congress' main financial supporters, primarily the industrial and commercial upper classes, regardless of the fact that the resolutions most likely would not be beneficial to the Indian elite. Myrdal argues that this contradiction can partly be explained by the elite's certainty that there would be a vast separation between resolution and implementation. As Myrdal (1968: 261) explicitly writes: "The Indian political pattern of bold radicalism in principle but extreme conservatism in practice, (…) was already well established before independence." As the Congress agreed on a program for independent India before the departure of the British, one explanation of this

dichotomy could be that the tradition of enacting resolutions that one does not have the power to implement at the time of enactment, has been the seed of such an attitude. On the other hand, why should one not be eager to implement one's own resolutions when the power to do so is finally obtained? When the British left, the official positions were available, and the independence movement's elite, such as the radicals and intellectuals, took over these official power positions. Many of those who in pre-independence times criticized the British for displaying imperial pomp and splendour entered the British Raj's privileged positions, houses and status. As Myrdal (1968: 274) expresses it: "(…) political independence had done little more than displace a foreign with a native privileged group." In a position of power and prestige, one can imagine that the urge to enforce radical reforms which might have a negative impact on one's newly achieved privileges, is reduced.

However, it was not merely newly achieved privileges that distracted official attention from the need for fundamental reforms in the first years of independence. In the aftermath of independence and the partition with Pakistan, the Indian society was unstable, with massive migrations across the borders, regional and religious conflicts and riots. These issues had to be prioritised and dealt with before ideological reforms and Congress' political program could be implemented. This prioritising and general moderation in domestic policy was supported by the people, which silenced any protests over lacking reforms. Despite the focus on urgent issues, the Congress Party continued to adopt progressive principles. Some were even included in the Indian Constitution's preamble, but merely as directive principles, and are for that reason not legally enforceable due to the comment by the Planning Commission that goes as follows:

> "The non-justiciability clause only provides that the infant State shall not be immediately called upon to account for not fulfilling the new obligations laid upon it. A State just awaking to freedom, with its many pre-occupations, might be crushed under the burden unless it was free to decide the order, the time, the pace and the mode to fulfilling them" (referred in Myrdal 1968: 276).

It was, so to say, made manifest that the implementation of a principle was not an obvious consequence of an enactment. Myrdal (1968: 276) argues that many of the laws were intentionally permissive, and the laws that actually were compulsory were either not enforced at all or at least not in the intended way. Thus, the combination of radical principles and conservative practice which was apparent in the Congress already before independence was

transferred to post-colonial Indian politics. The priority of *first things first* is understandable for an infant nation, but the gap between political rhetoric and actual enactment, seems to have persisted until now. Moreover, there is still an emphasis on doing *first thing first*, but instead of mass migration; the focus today is on creating further economic growth. If India is what Myrdal calls a soft state, an emphasised focus on economic prosperity might overshadow the environmental policies which have been enacted. Furthermore, if it is a soft state, it enables the business sector to take advantage of this to avoid implementing environmental policies.

However, Myrdal published the *Asian Drama* in 1968, and a lot has changed in India since then. Is the idea of a soft state still relevant in today's India? This I will discuss further in relation to my case study in chapter 7. Before I do that, it will be useful to shed light on the reasons why so many TNCs, including my case companies, have established themselves in India the past decades. The following chapter will discuss what factors have been important for the Indian investment climate, and describe the scope of foreign direct investment, before I turn the focus over to my own field study.

4. Investment climate and the scope of FDI

India has gone through a major change in relation to trade politics since independence, and has become one of the most attractive locations to invest in. What have been the major changes in trade politics since independence and why is India such a preferred place to invest? These are factors that are not directly decisive for this paper's focus on TNCs' environmental policies, but it is important to create the background of my case study and the context in which my case companies established themselves. I begin this chapter with a brief overview of the Indian government's politics of economics since independence. However, political reforms alone are not enough to attract foreign direct investments, and in section 4.2, I will examine other attributes that have an impact on the investment climate. Finally, there follows a description of the scope of foreign direct investments in India today, with a focus on Scandinavian investments, to relate it to my case study.

4.1 The opening of India

Similarly to many post-colonial states, independent India wanted to limit foreign interference in politics and economics. This cautiousness, combined with socialism's strong hold, ensured that the idea of self reliance and state control prevailed for four decades (Bjorvatn *et al.* 2006: 5). Under the rule of Prime Minister Indira Gandhi, restrictions on foreign direct investments were further tightened in the '70s. Companies were no longer allowed to have more than 40% foreign ownership, and TNCs were given the choice to dilute their equity or divest from India. Large TNCs, such as Coca Cola and IBM choose the latter option. Those who did stay made great profits on the lucrative condition in having a highly protected domestic market (Ruud 2002: 51–53). Not only was foreign investment firmly restricted; central sectors such as transportation were reserved for public, state owned companies; and the private sector was strongly monitored. These restrictions did not translate into satisfactory economic performance, and by the '80s it became clear that many of the post-colonial measures had failed. Many of the upcoming Indian bureaucrats and economists were educated in the US, and were influenced by neoclassical economics, and anti-colonial and nationalist sentiments had declined (Mooji 2005: 4). State leaders were more open to cooperation with foreign trade, and in an effort to increase national income and international trade, Rajiv Gandhi's government made some attempts to open up the economy in the mid-eighties. Taxes and import duties were reduced in order to give an incentive to the private sector to invest, and

more sectors were released from license restrictions and made available to the private sector (Cordbridge and Harris 2000: 102–3).

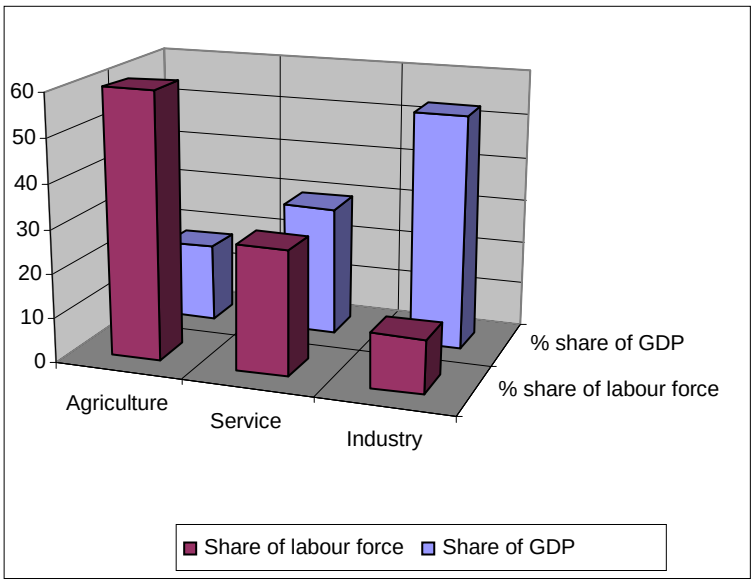
However, these efforts and incentives were neither sufficient nor very successful, as growth did not improve, and fiscal spending left the country in a state close to bankruptcy when Narasimha Rao (Congress Party) took power in 1991. The deficits had been financed during the ’80s by loans from financial institutions (such as the IMF) and commercial banks both at home and abroad. The public debt had grown large, inflation was high, and by the summer of 1991, the remaining state reserves were no greater than two weeks’ worth of imports (Cordbridge and Harris 2000: 151). The collapse in the state’s balance of payments, combined with pressure from the IMF and Indian economic liberals, more or less left the new government with no other choice than to introduce rather radical changes. This is when Manmohan Singh was appointed Finance Minister in the Congress Government of Narasimha Rao. Singh presented his Union budget to the Lok Sabha[13] that same summer, a rather radical strategy in an Indian context, based on capitalist ideas with a liberalisation and opening of the Indian market (Cordbridge and Harris 2000: 152; Bjorvatn *et al.* 2006: 5). The process of reform began by dismantling the license system in many industries; further industries which had previously been reserved state-owned enterprises were made available to the private sector, and non-resident Indians were allowed to have a 100% share of companies operating in India. Despite the measures to liberalise trade in the ’80s, foreign trade was still hindered by tedious bureaucracy and tariff rates amongst the highest in the world. Singh’s strategy simplified the investment rules and processes of importing and exporting, as well as further reducing taxes (Cordbridge and Harris 2000: 152–3; Bose and Jalal 2004: 189; Mooji 2005: 1).

Despite the tax reduction and opening of the market, the barriers still remain high today compared to other countries. Taxes on foreign industrial products averaged in 2006 32,4%, compared to 8,9% in China (Bjorvatn *et al.* 2006: 5). Nonetheless, the reforms have literally paid off for the Indian economy, as the country has experienced a tremendous economic growth after the introduction of the reforms. In contrast to China, which in many ways has experienced a similar development as India, the service sector employs more labourers and attracts more foreign investments than the mass production industry (Bjorvatn *et al*. 2006: 5).

[13] Can be translated as House of the People. It is the directly elected lower house of the Parliament of India.

As illustrated in Figure 1,[14] the industrial and service sectors contribute more than 80% of the GDP. The agricultural sector holds the smallest share of the GDP, but still employs 60% of the 500 million strong labour force,, whilst industry employs only 12% (Central Intelligence Agency 2008).

Figure 1: Distribution of labour and share of GDP by sector



4.2 India's comparative advantages

Economical liberalisation alone does not lead to economic growth, increased foreign trade and investments. To attract investment, it is essential to have sufficient comparative advantages to be chosen in preference to other potential host countries. India's most obvious advantage is the availability of cheap labour. The population is the second largest in the world, numbering 1.2 billion, and wage levels are low. It is difficult to estimate the average wage in India as there is a large informal sector, and statistics are in many cases unreliable. However, Deloitte's suggested estimate is that a manufacturing worker in India gets a monthly wage four times less than a Chinese college (Deloitte 2006: 8). Thus for labour-intensive companies based in a country with higher wages than India, it could be economically profitable to relocate their activity to India, where there is an almost unlimited supply of cheap labour.

[14] The Figure is based on numbers from Central Intelligence Agency, 2008. Available online at: https://www.cia.gov/library/publications/the-world-factbook/geos/in.html, downloaded 21st September, 2008.

A second advantage that is much advocated in attracting foreign investment to India is the level of education and English language skills. English is one of the official languages, which simplifies the process of outsourcing concerning bureaucratic processes of establishment, training of personnel and day-to-day activities. Further, India has a large group of well-educated people. Hundreds of thousands of engineers graduate every year, and the quality of education is overall considered good. Nonetheless, it is uneducated people who constitute the core of the labour force in labour-intensive industries. This group has a limited or non-existent knowledge of English, and chances are that they are illiterate, as this is the case for 40% of the Indian population (UNICEF). However, the number of Indians speaking English is substantial enough to give the country a great advantage in relation to exporting information services, such as customer service.

Another issue that is important for the establishment of production in a foreign country is the political situation in the society. To avoid situations such as strikes, transport barriers and halting of official systems, which can delay production, it is preferable for companies to have their activities in a stable society. India is the largest democracy in the world and some argue that this is a reason for outsourcing to India rather than to China. However, due to the absence of competitive political parties, China is more politically stable than India. Political conflicts, violent riots, demonstrations and terrorist attacks occur in India from time to time, making the society less stable and demanding a higher level of security. Thus, based on the fact that China receives many times as much foreign direct investment every year as India does[15], it can be argued that the form of government is not decisive for investment, but that stability in the society might be.

As discussed earlier in this paper, the advocates of the pollution haven hypothesis argue that some TNCs involved in potentially polluting industry migrate to nations with less strict legislation to avoid the expense of treatment plants and new technology (Ruud 2002: 164). India has an excessive environmental legal framework, but it is still less restricting than many others in both theory and practice. Combined with other economic advantages such as lower costs of labour, raw materials, shipping and property, a company can save a substantial amount of money by transferring outdated technology to India instead of investing in new technology in the country of origin. However, unsatisfactory technology and infrastructure are

[15] In 2004 China received $60.6 billion in foreign investment versus $ 5.5 billion going to India (Deloitte Research 2006: 9).

two factors that displease potential investors. The lack of and/or unreliable supply of power is an essential obstacle for industrial mass production in India. It is not uncommon that the power is cut several times a day, with duration varying from a few seconds to several hours. Sometimes it is caused by damage to cables, and at other times, the authorities purposely cut it to save power. India has a severe shortage of power supply and in some areas, such as Delhi, they ration it by cutting it in some quarters a couple of hours each day to be able to serve everyone a little. Power cuts delay production and make companies in industrial production and the service and IT-sector less competitive. Moreover, they can make it problematic to continuously treat emissions from industrial plants (Bjorvatn *et al.* 2006:29). Infrastructure, in terms of roads and ports, also lags behind growth in trade and production. The global shipping industry has undergone a technological development with which India has not been able to keep pace. Due to insufficient capacity to service the large cargo ships that dock at Indian ports nowadays, a cargo that takes about six days to ship from Singapore to Mumbai, might remain unloaded at the port for a full month. Also, road transport between the production plants and the ports suffers from low quality infrastructure. Only a small share of Indian roads is highways – a mere 195,000 kilometres contrasting with China's 1.4 million kilometres. All in all, Indian exports' lead time[16] to the US is three to four times longer than that of an average Chinese export (Deloitte Research 2006: 4–5).

To briefly sum up, a liberal economy has to be combined with other beneficial factors in order to attract foreign direct investment. Some of the more central attributes discussed in this section are labour cost, education, language and infrastructure. In comparison with China, India seems to come out slightly short handed, but India's economic growth has been remarkable, and more and more TNCs are establishing in India. As a result of the economic growth, the Indian middle class has grown into a group of potential customers consisting of almost 300 million people. Thus India is not only considered a profitable location for export-oriented production, but access to a market of this size can be regarded as an investment for the future.

4.3 Scope of foreign direct investment in India

The term foreign direct investment (FDI) refers to investments by foreign companies or investors, ranging from shares in a company to investment in an affiliate's factory building.

[16] Lead time is the time between the order and delivery.

The foreign direct investment must constitute a minimum of 10 percent of shares for it to be categorized as FDI rather than a portfolio investment (Grünfeld 2007: 21). The parent company together with the foreign affiliate constitutes a transnational corporation (TNC). In A.T. Kearney's 2007 Foreign Direct Investment Confidence Index,[17] India is listed as the second most popular target for FDI in the coming years, just behind China. In the financial year 2001–2002[18] the FDI inflow ended at 6.2 billion USD. This was considered an all-time high, but five years later, the inflow had almost quadrupled, reaching 23 billion USD. The inflow is not expected to grow in such a dramatic rate the coming years, but to remain at a more steady increase (Ministry of External Affairs).

The combination of a large and highly educated labour force attracts investors from diverse sectors, ranging from research and development offices, financial services, engineering services and IT, to outsourcing of labour intensive manufacturing and production. The service sector and computer software and hardware cover the largest percentage of the FDI inflow, with nearly 34% in the period from 2000 to 2008 (Ministry of Commerce and Industry 2008). Investments come from all over the world, but the four countries that have invested most in India since the millennium are respectively Mauritius, USA, Singapore and UK. Mauritius holds a vast share of FDI inflow at 44%, while there is a large leap down to the second place holder USA with 8.4% (Ministry of Commerce and Industry 2008). Mauritius is, similarly to the Cayman Islands, used for offshore banking by major investors. India and Mauritius have a Double Taxation Avoidance Agreement (DTAA) that ensures that investments between the two countries avoid the double taxation that is normally required (High Commission of India, Mauritius). 70% of the Mauritian population is of Indian origin and it is believed that non-resident Indians, in addition to the many large European and American investors established there, hold a substantial share of the investments from Mauritius.

Scandinavian investments in India have up to now been limited, and none of the countries are amongst the top ten investors. Even so, India is considered one of the locations that are preferred for investment and outsourcing, and there is a growing tendency in all the Scandinavian countries to do so. The Scandinavian countries have a strong tradition for giving aid, but the economic relationship with India has during the last decade changed from a donor and receiver relationship, to one based on mutual business interests. Hence it is believed that

[17] The Foreign Direct Investment Confidence Index is a regular survey of global executives conducted by A.T. Kearney, a global management consulting firm.
[18] A financial year runs from April to March.

the scope of Scandinavian investment in India will grow in the years to come. It is not likely that the Scandinavian countries will act as dominant investors in the near future, but it is still important to examine their role.

4.3.1 Danish investments in India

The relationship between Denmark and India reflects the change in India's role in the global market, where it is getting ever more established as one of the largest economies in the world. Denmark is ranked as the 24th largest foreign investor in India since the opening in 1991 with an inflow of 173.4 million USD. Denmark imports mostly readymade garments from India and among the major Danish investors are the A.P. Møller-Mærsk Group, Danfos, Danisco, Carlsberg and Ecco Shoes. The first Danish investments in India were within the cement and fertilizer sectors, but the variety of businesses has been broadened since the 90's to include amongst others, production of parts for windmills, temperature control systems, pharmaceuticals and food ingredients (Embassy of India 2008). There are currently around 75 Danish companies in India, including subsidiaries, sales offices and joint ventures (Ministry of Foreign Affairs of Denmark 2008).

4.3.2 Norwegian investments in India

Also for Norway, import from India consists mainly of clothes and textile products, and the trade between the two countries increased by 120% from 2000–06. Most Norwegian companies in India do not establish their own production units or offices, but rather outsource parts of the production to service providers or other producers. Nevertheless, there are currently more than 70 Norwegian companies established in India, including Aker Kværner, Statkraft, Det Norske Veritas, Borregard, Hydro, Jordan and SAS (Royal Norwegian Embassy 2008). Growth in production and outsourcing to India will give Norwegian industry competition, but at the same time will increase the demand for Norway's core export products: energy, oil and shipping. Moreover, a closer collaboration can help Norwegian labour-intensive companies survive in the tough global market by outsourcing parts of the production to India (Bjorvatn *et al.* 2006: 47–52).

4.3.3 Swedish investments in India

Of the Scandinavian countries, Sweden has the longest history of trade and investment in India, mainly within manufacturing and telecom. It dates back to the beginning of the

twentieth century, when Ericsson sold its first switchboard there in 1903 (Embassy of Sweden). In the ’60s and ’70s, investments were largely by traditional manufacturers such as Tetra Pak, while the ’80s and ’90s were dominated by the entry of retailers like IKEA and Hennes & Mauritz (Swedish Trade Council). Currently there are more than 100 Swedish subsidiaries established in the country and 1200 companies trading with Indian companies. Swedish investments employ approximately 320,000 labourers (Swedish Trade Council). Some companies are already mentioned above, but in addition to these, other well known commercial brands are Lindex, Indiska, Åhlens, KappAhl, ABB, Skanska, Volvo Cars and Electrolux. Many Norwegian companies outsource only parts of the production or use service providers; this goes applies to Swedish companies; but there is a growing tendency to establish full-fledged production plants that include development, supply and purchasing, production, finishing and sales (Swedish Trade Council).

4.4 Summary

India has experienced a rather dramatic change in trade politics since independence, of which the liberalisation and opening of the economy in the ’90s are of the most essential. They have experienced a growth that few other countries can match, and the prospect seems bright. The infrastructure has not been improved at the same pace as the growth of trade, and is by some considered a hindrance to efficient export activity. However, the country’s large pool of cheap labour, combined with a fairly high level of education and English skills are considered its most advantageous attributes. Scandinavian investment in India has been limited, but is continuously growing. Imports from India to Scandinavia are mainly textile products, while activities in India are of a broader variety, from sales offices to production units. In the following chapter I present my case companies, which are four of the almost 400 Scandinavian companies in India today.

5. Presentation of Case Companies

This study has four case companies. All of them are engaged in different activities: oil and gas drilling, textiles, paint and plastic. I have anonymised them and given them names based on the nature of their activity to make them more recognisable. One of the companies, Offshore Consultants, differs from the remaining three – Textile Production, Paint Company and Plastic Company – as they are industrial producers of commercial commodities, while Offshore Consultants is more of a service provider. Their potential environmental impact varies too and they range from the red to the green category[19].

In this chapter I will briefly present the companies' history, structure, and the character of their environmental management. The intention of this chapter is to create the context and background to the following chapter on findings and analysis.

5.1 Paint Company

The Paint Company Group was established in the 1920s and is today one of the world's leading manufacturers of paints, coatings and powder coatings.[20] The group employs around 7000 people, and has 40 production facilities, marketing and sales offices in 70 countries around the world. They established their first production plant outside Scandinavia in the early 60s, and it took another 20 years before they opened their first office in India. They now have several. The sales offices established in India aimed at the domestic market as well as the surrounding markets in South and South-East Asia. After several years of sales activities, the number of customers had grown to such an extent that it was more suitable to locate the production closer to the actual market, rather than shipping the products from a longer distance. In 2004, Paint Company moved into an existing facility in the industrial area of Daman, and started production of powder coatings. Production of powder does not require demanding premises, and it was fairly easy for Paint Company to retrofit the plant by setting up the necessary technology and machines without much change to the existing structure. When the company decided to expand the production of powder to include water based and solvent paint, there were many more considerations to be made. Solvents used in paint can be

[19] As described in chapter 3, all companies in India are divided into three categories; green, orange and red, according to the expected level of pollution and use of resources.
[20] All numbers and years are from the company's official website, but in order to keep the company anonym, I do not cite the URL address in the paper. Downloaded 28th January, 2009.
Other information is from interviews on 1st April, 2008.

potentially harmful for workers and the environment. Furthermore, they are highly explosive. This means that several precautionary measures needed to be taken, and it was decided that the best solution was to build a new plant, a Greenfield, rather than retrofitting the old one on a limited area.[21] The new plant was constructed in a new industrial area outside of Pune. Pune is Maharashtra's second largest city, a four-hour drive east of Mumbai. The industrial area is relatively new and modern and hosts several large international companies making home electronics, snacks, garments and jewellery.

The new plant was officially opened in March 2008, but due to unforeseen delays, production had not yet started when I visited. I was therefore not able to observe the production process. But I was given a tour around the plant. Because the plant is brand new, so are the technology and functional design of the buildings. Production is planned to limit the production of waste, and most waste water is used as one of the components in the paint. The waste consists mainly of the packaging for raw materials, such as plastic bags and cans and wooden pallets. These are reused if possible, sold to other production units who can reuse them (for example re-melting of plastic products) or delivered to the industrial area's governmental waste disposal site. Because the production has not yet started in Pune, I am not able to point out the actual waste production. But on a corporate level, Paint Company's 40 factories in 2007 produced circa 15,000 tonnes of waste and 70,000 tonnes of water-based waste and discharge. Additionally there were 18 incidents of emission which could harm the environment. The amount of waste increases every year, which can be explained by the increased production volume.[22] The authorities have not granted them as large a supply of water and power as they had planned on, so to meet the requirement of production, they use two diesel-fuelled generators. The generators are of a new high quality technology, but are in any case less energy-effective than power supplied by the state.

The unit in India is not registered as ISO certified, but Paint Company considers itself to be proactive in its environmental policies, both on a company level as well as locally at the unit. The corporation has formulated an extensive Health, Safety and Environment (HSE) standard applied to all its branches around the world. The unit in Pune has in addition developed its own locally adjusted strategies. Nonetheless, as it is laid down in their HSE Standard, all relevant national and local laws take precedence over the corporate standards. If the national

[21] I actually saw the old plant while travelling to one of my other case companies, and it was substantially smaller than the one they have today.
[22] HSE Report 2007, available on the company's official website. Downloaded 28th January, 2009.

legislations are less strict than the corporate standards, they are to follow the corporate HSE standard.[23] All units are to report on HSE performance annually (how much they have used and discharged), and every third year, an inspection is carried out by the headquarters in Scandinavia. The Maharashtra Pollution Control Board (MPCB) has been involved in the construction of the Greenfield, and had to approve the infrastructure for waste handling before it gave its final consent to start operations. The MPCB is supposed to have regular, unannounced inspections after production has started up, to check that the conditions comply with regulations.

The primary sources on which my findings are based are informal talks with the HR manager and project manager. The HR manager has worked for Paint Company since late 2007, while the project manager has been in Pune during the whole construction process. He was the first, and for a period the only, one who worked with the Greenfield from the beginning of 2006. Most of my findings, however, are based on a more structured interview with the operations manager. He is originally from India, but had just returned after ten years working for Paint Company in the Gulf. He is the one responsible for implementing the Paint Company's HSE Standard and for submission of reports to both the headquarters and MPCB.

5.2 Textile Production and Textile Retail

The Scandinavian owner of Textile Retail came to India in the 1960s as a missionary, but wanted to do something to improve the people's quality of life on the mundane level as well as on the spiritual. There is a long tradition of tanning industry in Tamil Nadu and to achieve his new mission, the missionary established a company in 1966 and started to produce leather sandals in order to create employment. After a while the production was expanded to include textile production. Today the company has specialised solely on this line. The products, such as fabrics, pillow cases and towels, are sold to high fashion interior shops in Europe. Textile Retail collaborates closely with the Indian textile producer Textile Production. Textile Production was established in 1966 and the two companies have worked closely together for nearly fifty years. Textile Production manufactures woven garments and home textiles such as tablecloths, bed linens, towels, pillow covers, and shirts. It is a vertically integrated company, which means that they have the full production process from yarn to finished product within the company. This enables them to control each stage in the manufacturing process. The

[23] HSE Standard, available at the company's official website, downloaded 28th January,.2009.

production is done in eight different localities. For example, dying, weaving and sewing are done in different places. In the altogether eight plants there are 1,300 employees, including the Scandinavian manager of product development and design, who is a permanent representative from Textile Retailer.

Even though the cooperation is tight between Textile Retailer and Textile Production, the environmental policies are set from the headquarters of Textile Retailer. Since the company was initially established based on an ideological idea of improving conditions for the local people, the owner of Textile Retailer has always emphasised the importance of the company's social responsibility, including pollution prevention. Textile Retailer has developed its own environmental policy, where the key words are "reduce, reuse and recycle". Textile Production and Textile Retail as a team are Öko-tex 100,[24] ISO 9001:2000[25] and ISO 14000[26]-certified by Det Norske Veritas. Additionally have they have developed their own "water-tag". This is a tag used on their products verifying that they reuse 80% of the effluent water they produce. Textile Production was among the first in the area to set up an effluent treatment plant. It can treat 500,000 litres of waste water daily, of which 80% is reused in production and the rest is left to evaporate.[27] This leaves behind around 200 kilos of sludge every day, sludge that is classified as hazardous waste by Ministry of Environment and Forest, and Central Pollution Control Board (CPCB). To avoid the hazardous waste leaking and contaminating surrounding area and ground water, it is to be stored in a secure landfill.

Textile Production is placed in a small town called Tirupur[28] in the far west of Tamil Nadu, close to the Keralan border. Tirupur is India's largest producer of cotton knitwear, such as T-shirts, accounting for over 70% of the country's knitwear exports. For this reason the city is often referred to as "the T-shirt city". Many widely known brands such as Hennes & Mauritz,

[24] This certification implies that no substances harmful to health have been used in raw materials and production. www.oeco-tex.com, downloaded 28th January, 2009.
[25] ISO 9001:2000 is a quality management certification, issued by a third party, here Det Norske Veritas. ISO is the abbreviation for International Organization for Standardization, a non-governmental organization developing international standards for business, governments and society. http://www.dnv.no/tjenester/sertifisering/systemsertifisering/kvalitet/iso9001/index.asp, downloaded 28.01.2009. www.iso.org, downloaded 28th January, 2009.
[26] ISO 14000 is a certificate verifying that companies' environmental management has been measured against best practice standard and found compliant. It is issued by a third party. http://www.dnv.no/tjenester/sertifisering/systemsertifisering/miljo/iso14000/index.asp, downloaded 28th January, 2009.
[27] The water is treated using a combination of the techniques "reverse osmosis" and "Multiple Effects Evaporation."
[28] Small in an Indian scale, however. There are approximately 550,000 inhabitants.

Lene V, Ellos, IKEA and Nike have production units or suppliers here, but Textile Production is one of the few weavers here, as most of the production is knitted. The high density of industry has made a severe impact on the environment, especially on the water sources. The municipal area lacks a sewage collection and treatment system, as well as an organized drainage system. Untreated effluent from the tanning industry has been discharged into the local river for decades, and the quality is far from potable. As the city lacks an adequate water supply, the industries extract groundwater or import water from other districts to supply the water requirements of production. Due to the severe water shortage, all the industry in the area requiring water, including Textile Production, is categorised as "red" or "highly contaminating" by the Tamil Nadu Pollution Control Board (TMPCB).
Tirupur and Textile Production was the place I stayed the longest during my field work, and I spoke with several people. The Scandinavian manager of product development and design, who is a permanent representative from Textile Retailer, was my main contact while there, but I base most of my findings on an interview with Textile Production's operational manager.

5.3 Offshore Consultants

Offshore Consultants was first established in 1995 as a drilling consultancy and oilfield trading company. The office in Mumbai was opened in 2000 and acts today as the group's Headquarters. The group has several offices throughout the world in South America, South-East Asia, Africa and Europe. The company acts mainly as consultants and technical advisers, manages rigs and performs drilling operations for oil companies. They have bought more than forty agencies, most of them Scandinavian, but also some American and British. On mission for an oil company, they locate oil or gas, drill a hole in the seabed, plug it and then hand it over to the oil company that pumps and refines the oil or gas. According to the managing director, their part of the job pollutes minimally and therefore they have no corporate environmental policies other than basic rules such as not throwing garbage overboard. The company follows the national laws and regulations. Their contribution to promoting improved environmental performance in the sector lies in introducing and distributing more environmentally advanced technology and techniques to their clients. The managing director has never been in contact with the MPCB.

The reason why they established in India is the development in the Indian offshore sector and the general substantial growth India has experienced the last years. China has also been a

potential location for establishment, but the managing director considered it easier to establish in India because English skills are believed to be higher here than in China. He thinks this is a reason shared with many of the companies that have established activities in the country the last years. Another reason for Offshore Consultants to establish in India might be that the company's owner and managing director had visited India regularly as a representative for other companies since the mid '80s, and had developed many contacts within the sector. He has about forty years' experience in the oil and gas industry and was previously general manager of another large international company with headquarters in Scandinavia. As mentioned above, Offshore Consultants distinguishes itself from my other case companies as they are not producers as such; but the managing director and I spoke of his impression of environmental practices and audits in the oil and gas sector.

5.4 Plastic Company

I contacted one of the world's largest retailers of furniture, household products and accessories, knowing that several of their products are produced in India. As a retailer, they purchase their products from independent companies, and the production process is not officially regarded as their responsibility. Even so, this company has since the 1990s had a team working solely on corporate social responsibility and environmental issues related to production and retailing. They have developed a strategy and set of standards which suppliers are also to act in accordance with. I was asked to join two of their business developer managers to visit one of their suppliers of household plastic products, such as water mugs, chopping boards, plastic coat hangers and lunch boxes. This company has been their supplier for ten years and more than half of their production supplies the Scandinavian retailer.

The supplier has its own design and brand too, which is available in stores in all major towns of India as well as being exported to more than twenty countries across the globe. The company employs almost 500 workers and production goes around the clock six days a week. The company was established in Mumbai in 1985, but in the late '90s, production was relocated to Daman.[29] This plant has during the years been expanded to its limits. As the demand and production keep increasing, it was decided that more space was needed, and they are currently building a new plant, a Greenfield, in another area of Daman.

[29] Daman is one of India's seven Union Territories. Union Territories are partially independent units administered by the President through an Administrator appointed by the President. Still, much of the administration falls within Gujarat state, including the Pollution Control Board.

Production is a fairly straightforward process. Plastic granules which are bought from a supplier are inserted into a heating and moulding machine. The machines have an indention that shapes the product when the granules are hot and soft. When cool, the items are packed ready to be shipped to the customers. The machines are driven by electricity, but need water to cool the lubricant oil in the machines. The water is not in contact with the oil and can be reused numerous times. The oil, if treated correctly, has to be replaced approximately every second year. Sludge from exhausted oil, waste from packaging and failed products are gathered and stored inside the factory until they are disposed of. Most of the waste, consisting of plastic and paper, can be sold to smaller factories that reuse it. Materials that cannot be recycled, such as the oil, are delivered to authorised disposal storages.

This kind of plastic production is within the limits of effluent to water and air to be categorised as "Green" by the Gujarat Pollution Control Board (GPCB). The green certification is valid for approximately two years and is renewed by submitting a report containing information about consumption of raw materials and water, how many employees, how much they produce and so on. As long as production is considered green by the GPCB, there are no further requirements for environmental measures from the authorities. Nonetheless, the Scandinavian TNC has additional requirements for them to become proactive – requirements ranging from smaller adjustments to large investments at the Greenfield. Other than being categorised as green, neither the Indian producer, nor the Scandinavian TNC has any kind of certifications or tags.

During my visit to the production unit, I spoke with both of the Scandinavian TNCs' business developer managers during the day, but most of the findings presented in the following chapter are based on an interview made with one of the factory owners (family business).

5.6 Summary

As seen in this presentation, the case companies' potential environmental impacts and challenges vary, and so do the ways of managing them. However all of them claim to comply with the national laws and regulations, and most of them are proactive in the sense that they make extended efforts beyond the demands of the authorities. In the following chapter, I will elaborate their experiences in implementing environmental policies.

6. Push and Pull Factors in the Implementation of Environmental Policies

All companies established in India, both domestic and foreign, are obliged to comply with the minimum standard of the states' environmental laws and regulations. The states' policies might be of a higher standard than the federal policies, but never lower. All of my informants claim to fully comply with the policies of the respective State Pollution Control Board (SPCB), and most of them consider themselves as doing more than what is required of them. My case companies are proactive in their environmental management, but acknowledge that this has not always been unproblematic. In this chapter, I intend to describe the case companies' experiences in implementing environmental policies and to identify the push and pull factors which make them go even beyond governmental policies. Section 6.1 describes the pull factors that have made them implement the environmental policies, while section 6.2 discusses the challenges they have experienced in the process.

6.1 Pull factors facilitating the implementing of environmental policies

6.1.1 Corporate and governmental pressure

All the three producers emphasised the importance of demands from headquarters, customers, the partnering company and governmental institutions, in their choice to implement environmental policies. The basic idea of doing business is to generate profit, and profit can be maximised by minimising expenses. If environmental measures call for extra costs, most companies will try to avoid these, if possible. Thus, pressure and demands from an authority, whether governmental or corporate, can be decisive for the environmental outcome of production.

The owner of Plastic Company acknowledged the importance of the Scandinavian TNC in their proactive environmental management, and he said with emphasis that the TNCs' input and persistence had made the implementation process easier and faster. The Scandinavian TNC has a team working with environmental issues related to the production of their products. They have no ownership in the production units, but they have a set of guidelines with which they expect their suppliers to comply. They are not in a position to impose sanctions, unlike the SPCB, but they can refuse to collaborate with a potential supplier, and

thus use their power as a sought-after partner. Nevertheless, a potential supplier is not immediately turned away if it lacks the desired standards at the time of negotiation. The TNC's codes-of-conduct-team works together with the supplier's management to create a strategy for achieving the desired standard. The supplier is then given a certain time to make the adjustments, while producing for the TNC, before a follow-up inspection is carried through. If the conditions are satisfactory, the TNC will offer the Indian supplier a more permanent deal.

Paint Company has formulated a corporate social responsibility policy that all affiliates have to comply with in addition to the national law of the place they are located. Annually they submit audits to their headquarters of their use of resources and the volume of waste they generate. The audits are reviewed and responded to by the TNC's Department for Health, Environment and Safety. Based on the results, they set a limit for the next year's performance, always slightly lower than the previous year to ensure that the company is continuously improving. Every third year, experts from the headquarters in Scandinavia carry out inspections at all the affiliates. This is an example of good internal control and management, but intra-control is not the optimal solution to ensure compliance. It is important that an external and objective institution does the control so that the chance of mischief will be reduced to a minimum. Private companies such as Det Norske Veritas can issue certifications that verify a company's levels of standards, but only governmental institutions have the means to impose powerful sanctions, the tools to apply pressure or to reward actions that are done correctly. This can be exemplified by a case about which the factory owner of Plastic Company told me, where pressure by the Gujarat Pollution Control Board (GPCB) speeded up the implementation of a governmental notification. The state government issued in 2005 a notification that every factory should have a board outside the gate which displayed the production's categorization (red, orange or green), and which demands were issued to them by the Gujarat Pollution Control Board (GPCB). The factory managers in the area complained that they could never find the time to put up these boards, and that the officers would probably not come and check anyway. But the authority effectively managed to enforce the notification;

> But we saw when the rule of the government got notified, within four to six months every factory had a board outside. Every factory had a board! Because that guy [an official] said that "If you don't have a board I will not give you this license". So immediately it happened. So

> the pressure from the government works the fastest, and then comes the customers (…).” (Owner of Plastic Company)

The Gujarat Pollution Control Board has the power to stop the supply of water and power, as well as to close down the factory; and when the companies’ production was threatened, the management managed to find the time to put up the boards. Private consultant companies and internal control bodies neither could nor would impose such threats.

Textile Production is the only one of my case companies which is categorised as red, and is therefore the case company with most interaction with the state pollution control board. Textile Production has to submit monthly audits to the Tamil Nadu Pollution Control Board (TNPCB) and receives unannounced inspections several times a year. The Operational Manager of Textile Production recognized the TNPCB’s important role in their environmental performance, as he said:

> We are in the top three in Tirupur, maybe the best, what environmental issues are concerned. (…) Demands from Sweden and Tamil Nadu Pollution Control Board are an important reason for the good practice. Without this we would probably be as bad as the rest.

The operational manager had the impression that the TNPCB had become stricter during the last years, and that they had more actively issued sanctions on companies that did not comply with the TMPCB’s requirements. He considered it a positive development, but at the same time he thought the TNPCB’s approach towards the companies was too brusque. During the inspections, they point out what is wrong and insufficient, but never offer them any advice on how to improve or how to implement production in a more satisfactory way. He considered the TNPCB as decisive in making the company comply with the state environmental policies, but in no way helping them to become proactive. They used only the whip, and no carrot. It is rather pressure and demands from the Swedish partner that makes Textile Production go beyond governmental demands. All the inputs and ideas on how to improve environmental practices have come from the Swedish partner, salesmen and consultants.

6.1.2 Pressure from the public

A more aware public can also act as watchdogs and important actors applying pressure on both the TNCs and the authorities. The owner of Plastic Company had noticed that the development already has moved in that direction:

> People are more aware nowadays. I travel on train regularly when I come up and down [between Mumbai and Daman]. I have lots of friends who have industries in Vapi.[30] They are now more conscious. They have a lot of customers asking them questions. They have lot of pressure from people asking them, "Why have you not done this, why have you not done that? After so many years in the business, you know this is wrong." And also what I have been seeing is a lot of children asking their parents "Why are our factories doing this?

Increased awareness amongst the general public and environmental organizations can influence the companies by applying direct pressure, and also put the issue on the political agenda. However, amongst my case companies, complaints and pressure from locals and NGOs were not much of an issue, and none of them had any contact with environmental organizations. Paint Company did have some meetings with villagers from the nearby areas, but that concerned the cost of the real estate rather than environmental issues. The absence of local protest and pressure could be a result of my case companies being proactive and thus having a limited impact on their immediately surrounding environment. Plastic Company is categorized as green, but many of the production units in the area are categorized as red and orange. The owner of Plastic Company told me a story of a manager of such a factory in the Daman area:

> This is one of the stories one of my friends gave me on the train, saying that "I was able to push off everyone when pollution questions were asked to me. But the day my son came to the factory and he saw all this, and he had had so much of environment and pollution in the school days.[31] When my son asked me this question on why we are doing this, I had no answer but put up an effluent treatment plant. Because up to that I used to take my eye off and rub off everyone, but when I had to tell him that we don't do this right, it was too difficult."

As in this case, pressure from the general public such as family, friends, employees, NGOs, can be consciously harder to dismiss than that from the authorities, but the public has few means to punish environmental violators. The most powerful tool the public has to defend

[30] Vapi is a neighboring city which houses more than 1500 industries. Seventy per cent of the industries are chemical plants producing, for example, pesticides, dyes, paper, pharmaceuticals, plastic and glass, most of them categorized as "red" by the Gujarat Pollution Control Board. The high density and number of industrial plants has not failed to impact the place, which was in 2008 listed by Blacksmith Institute and Green Cross Switzerland as one of the ten worst polluted places in the world.
Source: http://www.msnbc.msn.com/id/20745214/
http://www.time.com/time/specials/2007/article/0,28804,1661031_1661047_1661015,00.html, downloaded 19th January, 2009

[31] According to the owner of Plastic Company, they have environment as a subject in school from the fifth standard and onwards; not as a scoring mark subject, but they have to write small papers and are given questions to work with. This increases the awareness and knowledge amongst the children.

their rights to protection against environmental hazards in India is that private persons whose constitutional rights are violated have the opportunity to file a case against the authorities. This is called public interest litigation (PIL), and is increasingly being used in the effort to safeguard the public's rights. More than 500 farmers from the Tirupur area, where Textile Production is located, have repeatedly pleaded their case to the government and filed a suit in the Madras High Court because of the pollution they had been exposed to.[32] The pollution was caused by effluents discharged by the textile and knitwear units in Tirupur into the Noyyal River. The effluents have poisoned several water reservoirs, and the pollution gradually made around 30,000 acres of fertile land unfit for cropping. The pollution in the river has also made life difficult for the people and livestock along its banks. A "Loss of Ecology Committee" was instituted to assess the pollution's impact and to recommend a suitable compensation to the farmers. In December 2004, the committee gave its recommendations, and more than 550 farmers were awarded compensation. In other similar cases, production units have been closed down or instructed to change their practices. The pressure is first applied to the authorities, but the industry has to take the consequences of the court's decision. Thus active public pressure can influence both the authorities and the industry: the authorities to better enforce regulations to prevent such cases, and the industry to comply with the regulations to avoid sanctions from the authorities. For the latter to be effective, it is essential that the enforcement of the sanctions is thoroughly carried out, to make it work as a precedent; and similarly to enforcement of environmental policies, this has in many instances failed. There are stories of shut down factories that continue their production behind closed doors, simply by changing their name or by bribing the officials. By December 2008, four years after the committee gave its recommendation in the Tirupur-case, compensation has just been released to nine of the awarded farmers. The lacking enforcement of the sanctions can partly be explained by the conflict between employment and environment in India. According to the managing trustee of a Tamil Nadu-based NGO I met with during my field work, the SPCB is under heavy pressure from the civil society not to close down plants that do not comply with the regulations. A shut down would mean a loss in the employees' wages, as well as a decline in the general economic growth in the area, or as the managing trustee expressed it: "There is so much of foreign exchange that they [the government] are earning from the exports. So what would happen if they closed down the factories? That much of revenue would go! So the government cannot afford to be very

[32] http://www.hindu.com/2008/12/18/stories/2008121854060300.htm, downloaded 9th May, 2009.

strict." The TNC and the industry itself are important for the local economy, both for the government and for the public. For officers who are politically appointed, actions which can increase unemployment and decrease economic growth would not be a good investment in the vote bank.

6.1.3 Win-win situations

> The financial aspect is not always the most important or the only aspect to consider. It is important also to see the big picture. Better environment makes it a better place to live and work. A good working environment should be on every manager's mind and for that reason environment is important. (Operational Manager in Paint Company)

It is a fairly prevalent view that economic and environmental interests are incompatible. The Operational Manger of Paint Company emphasized the importance of not always letting the economic argument take priority. But as stated above, is it in the interest of most commercial businesses to generate as much profit as possible, and environmental concerns will in such cases not be prioritized. Still, the Operational Manager at Paint Company regards the financial argument as irrelevant. The firm itself employs a thorough-going system for waste management in which most of the waste is reused or recycled. Wooden pallets and empty plastic and tin cans are repaired, cleaned and reused, and the waste water from cleaning is used as one of the components in the paint they make. Waste they cannot repair or reuse, such as plastic bags in which the raw material was packed, is sold to neighboring companies that melt and reshape the product. The waste they cannot reuse, recycle *or* sell is disposed as general waste and delivered to the governmental waste disposal site at the industrial area. Moreover, in reusing materials, they save some costs as well, since they make some earnings by selling some of the waste. All in all they have actually managed to make a small profit on reusing and recycling and the Operational Manager said with emphasis that if you do things properly, the financial part should not be a barrier. It is all about attitude.

Textile Production is the only one of my case companies that has invested in a treatment plant. The water in the Tirupur area has a high level of salt, and to achieve the optimal results in textile production, especially the dying part, it is preferable to use clean, non-salty water. Because of the poor water quality, Textile Production used to buy water imported from other districts. The water was transported to the city in large tank trucks from a radius of around 50

km.[33] In order to reduce the cost of importing water, as well as reducing the use of water resources, they wanted to be able to reuse the water used in production. They were presented a solution by a consultant company distributing treatment technology. The effluent treatment plant they chose was a large investment for Textile Production as it cost more than three crores (approximately four million Norwegian kroner). Additionally there are some expenses of running and maintaining it, so it could appear to be a very expensive measure, but they save all the expenses they had on importing water. They treat and reuse 80% of the water they need for their production, and the quality of the treated water is higher than that of the previously imported water, and thus the quality of their products has improved. The amount of money they save on not buying water has not fully covered the expense of the plant and the overall production costs have increased. However, as the quality has improved, they have successfully raised the price paid by the customer, as their products are considered to be of higher quality and exclusive products.

Plastic Company has also managed to turn their environmental efforts to their own advantage. Holding a high standard on environmental management has made Plastic Company a favored supplier for other large retailers and companies from all over the world. Many TNCs require a certain environmental standard, and it is preferable to cooperate with a producer that has already implemented these changes. At the end of the day, being proactive in their environmental management has given Plastic Company a comparative advantage, rather than being a financial burden, as some skeptics argue. This can be called a win-win situation.

6.1.4 Knowledge about problem and solution

> Because a lot of time education and information lacks. (…) It is not that they never wanted to, but there was no one from the government telling them, there was no one from the customers telling them, so he was doing what he needed. The day someone told him, he changed himself. (Owner of Plastic Company)

To achieve a beneficial environmental management, it is essential to have awareness of the problems, but also to have knowledge of how to deal with them. The owner of Plastic Company did not think that the industrial sector is reluctant *per se* to implement environmental policies, but that many are aware of neither the problems nor the solutions. He emphasizes the importance of having access to environmental specialists or consultants who

[33] http://archives.digitaltoday.in/businesstoday/20060730/features1.html, downloaded 21st January, 2009

could give guidance on how to be environmentally advanced in a more concise and specific way than what is prescribed in the governmental regulations:

> When companies approach factories they should not demand, saying "I want you to be environmentally friendly as per the local law." They should have some kind of specialist on environment because laws are very tricky. (…) So what big companies should have are a crisp idea and a short note that what checks and balances you as a manufacturer should have." (Owner of Plastic Company)

The Scandinavian TNC cooperating with Plastic Company has no ownership in the production units and never subsidises any of the suppliers. What they do offer is free consulting, information, follow-up and guidance by the codes-of-conduct team. They have many suppliers all over Asia, and organize seminars from time to time for all the managers. The owner of Plastic Company had participated in such a seminar, and he had appreciated the opportunity to meet with other managers and to share experiences. Their production is categorised as green and the interaction with the SPCB is therefore limited. They never have inspections and simply hand in a small report every second year listing how much water and power they use, and how much waste they produce, to renew their green licence. The SPCB have no further suggestions for what a green company can do to improve their environmental management, and all the efforts Plastic Company have implemented are based on ideas from the Scandinavian company. One of the measures Plastic Company had implemented to be approved as the TNC's supplier was waste management. Non-hazardous and hazardous wastes are stored separately, and hazardous waste is stored above the ground level to prevent it leaking out into the soil and ground water. Non-hazardous waste, such as failed plastic products, is resold to smaller factories, while the hazardous waste is disposed of at the authorized waste disposal site. However, at the disposal site, exhausted tube lights are treated like general waste. Tube lights contain mercury, one of the largest pollutants of soil and water sources in the area. The Scandinavian TNC requested Plastic Company to store the exhausted tube lights in a safe way until the SPCB comes up with an adequate disposal arrangement. Plastic Company has now stored the tube lights for three years. What the owner likes the most about this project is that it spreads the information to the employees and their families:

> They used to wonder why this factory owner was saving the tube lights. The workers were thinking, "What is happening?" But over a period of time they have asked questions during our sessions with the workers – 'Why are we doing that?' And we tell them it is mercury inside and what can happen with it (…). Now he [the worker] is also a

> conscious guy who feels back home that 'When I throw away my tube light I have to be a little careful, at least not breaking it, and dispose of it in a proper manner'. So also green category factories can play an important role, because they can influence hundreds of families at home to understand what environment is about (...).That environment is a concern, water is a concern, and oil is a concern. So that way, factories should have programs [even if they are categorized as green]!

If corporate environmental policies can contribute to spreading knowledge and awareness of environment and pollution in this way, it challenges the criticisms of proactive TNCs as only pockets or islands of environmental excellence in a sea of dirt, and supports the pollution halo hypothesis of TNCs as vehicles of improved environmental management. With a spreading and increase of awareness, the public can to a larger extent act as watchdogs, and as the owner of Plastic Company expressed it: "When it [awareness and knowledge] goes back there the demands from the people to the industry automatically come up. " General public awareness is decisive in making the authorities and politicians prioritize environment, and they are therefore important actors of pressure both on TNCs and the authorities.

Knowledge and awareness can change attitudes and also economic priorities. This has been the case in Tirupur where Textile Production is located. As written above, they had installed an effluent treatment plant. I met with a consultant from the company that installed it. That company was established in 2000, and they started working with Textile Production three years later; and he could tell me that "[Textile Production] was our first customer, but after this we have installed ETPs in more than 150 plants!" The Noyyal River, which runs through the area, looks more like a landfill than a river, and the only thing running in it is a brown indistinguishable mixture of waste water in all different colors from the many dye industries in the city. The ground water is very salty due to overexploitation, and is not suitable for textile production. The environmental constraints on the water resources are getting very urgent, and the consultant was convinced that the increased awareness was the reason that the market for effluent treatment had grown so much.

6.2 Push factors challenging the implementation of environmental policies

Even though all of my case companies comply with the Indian environmental policies, and even beyond them, they had met some challenges in the process. Following is the description

of push factors that they found challenging in the implementation process, as well as what they think can be a hindrance for the development of a more general environmentally friendly practice in the industrial sector.

6.2.1 Complex and rigid regulation

Several of my informants expressed frustration over legislation which they thought was written and enforced in a rigid fashion that made the implementation process more troublesome than necessary. The managers had been given the *Handbook of Environmental Laws*, an approximately 300 page-long book listing the laws and regulations they are to follow. According to the owner of Plastic Company, the "(…) laws are very tricky. There is a big book like this on environmental act which we have. I will never have the time to go through those 300 pages of understanding every law and everything". He thought it was too long and that it was difficult to understand how it was to be implemented in practice. Most TNCs expect their suppliers to comply with the governmental policies without offering assistance. To that, the owner of Plastic Company said that if a company just gave him the *Handbook of Environmental Laws* and said "Please read this book and follow everything and tell me you are following. It will never happen. It will never happen. Difficult, it is very difficult." He thought it was very unlikely that managers would prioritize reading through the laws thoroughly, and be fully able to ensure compliance. Instead they should be given a more concise checklist, or as he expressed it: "Specific advice would be more helpful for factories and implementation will happen much faster. Otherwise implementation happens, but it happens with a delay." He was sure he would have implemented the environmental policies regardless of the presence of the Scandinavian company, but emphasized their importance in making it happen so rapidly.

The operations manager in Paint Company expressed his frustration with the legislation: "The authorities operate with an old legislation from 1948 and are very narrow-minded in relation to this." In saying this, he had one particular situation on his mind where the implementation of governmental and corporate environmental policies conflicted. Paint Company was instructed by the authorities to comply with the governmental policy strictly and literally, even if it was of a lower environmental standard than their corporate policies. Also in the Paint Company's corporate policies, it is stated that they are always to act in accordance with the national governmental laws as well as the corporate policies, and in this case Paint Company ended up doing double work due to what they considered as rigid enforcement of

the legislation. Paint Company's plant in Pune is brand new and some construction work was still going on when I visited. Before a company can start up production, several inspections are carried out and revised before a final consent to operate is issued. To achieve the final consent, the conditions at the new plant also have to be approved by the state government's Chief Controller of Explosives (CCoE). CCoE's responsibility is to ensure satisfactory safe storage facilities and routines for inflammable and explosive assets. To minimize the danger of fires and explosions, such assets are to be stored in an airtight tank placed a certain distance from the actual factory building. The assets the Indian legislation has resolved to be inflammable and explosive are the solvents diesel, white spirit and xylene. Paint contains all these three assets, and Paint Company also has safe storage of these assets included in their international corporate policy, but this policy also states that water-based emulsion, epoxy-based binder (paint base) and polyurethane (binder) should be stored in the tank. The company policy is actually stricter than the official one, but either way it was not approved by the CCoE to store the six assets in the same tank, as it would it deviate from the rules. Since Paint Company is obliged to follow the instructions of Indian governmental officials *and* the rules set by their headquarters, the solution was to build two tanks. Today two identical tanks are located next to each other a stone's throw away from the main building at the plant in Pune; one for the three solvents listed by the Indian legislation, and one for the three additional assets listed by Paint Company's corporate policy.

This situation illustrates that the Indian environmental legislation actually can be a hindrance to improved environmental practice, and that it comes up short in the development of international environmental standards. A large TNC like Paint Company with substantial financial strength can manage to make such an, in Paint Company's point of view, unnecessary extra expense. But a company with less financial backbone and environmental principles would easily follow the instructions of the officials rather than double the expense, work and use of space.

6.2.2 Slow bureaucracy

A rigid and old-fashioned regulation can be a hindrance to the improvement of environmental management, and also with regard to the governmental institutions, the case companies have reflected on slow bureaucracy as a possible hindrance to a proactive environmental practice. Offshore Consultants are the distributors of effluent treatment technology to the offshore sector, and the owner was concerned about the absence of this in the oil companies' operation

in India. When oil is pumped up from underneath the sea bed, it brings with it a large amount of water, usually more water than oil. This water is let back out to the sea, but the water contains oil and other contaminants, and to prevent pollution, it should be treated before being discharged. But according to the owner of Offshore Consultants, this separation process is rarely done in India. Untreated water contains several hundreds, maybe thousands of contaminating parts per million (ppm)[34], while available technology can treat the water to maintain a level of only fifteen ppm. In addition to treating the water, the oil company could keep the oil extracted from the waste water. The amount of extra oil extracted would probably not be enough to be profitable, but the owner does believe that over a period it would cover the expenses of the effluent treatment technology. Offshore Consultants had worked over a year with a deal between governmental oil and gas company and a Norwegian-American company that produces pollution control systems. Jobs like this are usually put out on tender, but Offshore Consultants was given this job as a nomination by the governmental company. The formalities were ready and they were near a closing of the deal when the governmental company suddenly decided to put the job out on tender. These processes usually take at least half a year, and in the meantime the company will keep on discharging polluted effluent. The owner of Offshore Consultants thought slowness like this is typical for the Indian bureaucracy, and that it slows down the process of accommodating better environmental practice through innovative technology.

Textile Production has an advanced effluent treatment plant where 80% of the water is reused, while the rest is left to evaporate. When the water has evaporated, it leaves behind sludge, almost 400 kilos every day. The sludge contains chemical pollutants and should be stored in a secure and waterproof landfill to prevent the groundwater from being polluted. After 35 years, the toxic chemicals will have lost their strength, and the sludge can be disposed of as general waste. When I visited the site of the effluent treatment plant, the sludge was stored in plastic bags under sheet metal roofing with tilt walls. They did not store the sludge according to the regulations because they were waiting for permission from the state government to build the secure landfill. It is somewhat unclear to me when Textile Production submitted the application, and consequently I cannot say if the responsibility lies with the company or with the state government. But if the bureaucratic process is slow, it can hinder and further delay the company in completing the implementation of its pollution prevention.

[34] Parts per million or ppm means out of a million. It usually describes the concentration of an element in water or soil. One ppm is equivalent to one milligram of an element per liter of water (mg/l)

The intention of using these examples is not to pin the blame on anyone, but to simply illuminate that bureaucratic slowness by governmental institutions can delay corporations from implementing proactive environmental measures. It is therefore important that the governmental institutions organize the necessary bureaucratic processes in a way that will not hinder good environmental management, including avoidance of corruption.

6.2.3 Corruption

I have been told several stories of slow bureaucratic processes being expedited with the help of bribes, and corruption is one of the factors all of my informants stressed as problematic in the process of implementing environmental policies. All of them had experience of it and some of them stated that it is more or less hopeless to get your case considered unless you pay the expected "fee". Government jobs are not the best paid, and some officials use this as an excuse to justify their request for extra fees. If one is to build anything, such as the secure landfill in the example of Textile Production, or if the factory building needs to be extended, one must submit an application to the state government. According to one of the informants, the application will probably never be processed unless one pays the requested amount of money. Another of the case companies had to cut down a group of trees on the plant when they were extending it. They were then told to pay some kind of environmental compensation for cutting down these trees. The requested amount was 300,000 rupees (about 40,000 NOK), and the official claimed that it was going to be used to replace the trees with new ones outside the factory area. The idea of protecting the stock of trees is nice, but the TNC management has never seen a trace of the announced trees.

On the borderline of corruption is the phenomenon of nepotism in official positions. The owner of Offshore Consultants had the impression that "many of those obtaining governmental positions with the power to do something for the environment have not received the job based on their competence, but through private relations." Even though governmental jobs are not very well paid, they are very secure, and lucrative in their own way. To help family members get a job in a governmental institution can be considered as an investment in the future. Some of these officials work their daily hours without any professional or personal commitment to the field, and thus do not push forward changes and developments. Institutions such as the SPCB consist of both administrative officials and specialists. The specialists are the ones conducting the inspections, but according to the owner of Offshore Consultants, corruption also gags the ones who are not appointed on the basis of

private relations: “Those who actually have the knowledge close their eyes to violations if they get some money under the table. You can pay your way out of everything, and as long as you can’t get rid of the corruption culture in the country, it is difficult to implement anything at all!”

6.2.4 Lack of space

Also simple practical issues, such as lack of space, can act as hindrances in the companies’ efforts to improve their environmental practice. Environmental measures may require adjustments that are easier to carry out when one is constructing a new factory plant, a so-called Greenfield, rather than to do retrofitting: making adjustments at an already existing plant. In many cases this has to do with natural physical barriers. For example, an effluent treatment plant like the one Textile Producer had installed required at least two hundred square meters. Most companies have tried to make use of as much space as they have for production activity, and have no space left to install, for instance, an effluent treatment plant. According to the Indian regulations for fire protection, the plants have to be separated by a certain space to prevent diffusion of fires to neighboring plants. Improving their environmental practice could actually make them violate laws under fire protection regulations. The lack of space has also hindered Plastic Company from making some of the adjustments they have wanted. At the seminar the owner attended, which was organized by the Scandinavian TNC, one of the topics was rainwater harvesting. Another supplier had spoken warmly about their experience with it, and the owner of Plastic Company was inspired to do the same. However, this was not practicable at the Plastic Company’s plant, as they had extended the factory building to the maximum of what is legal. Thus he decided that he would do this if he was ever to establish a new plant. When I visited, he had just started the construction of a Greenfield, and he had notified the architect that he wanted to include a rain water harvesting system. The Scandinavian TNC has no ownership in the new plant, but takes part in the process as consultants.

6.2.5 Financial limitations

Improving environmental performance by, for example, installing an effluent treatment plant might not only require substantial space, but also a large investment. As all of my case companies are quite strong financially, they have coped with the financial challenges they have had. The cost of operating the effluent treatment plant is almost covered by what Textile

Company saves on not having to import water, but still it was a very large investment, the weight of which only large and financially strong companies can carry. In India there are huge numbers of small production units no larger than a one-man production in the backyard of a private house. It would be very challenging both financially and physically for such a unit to install any treatment infrastructure. The problem is that there are so many of these small units in India that the amount of waste and effluent together constitute a substantial threat to the environment. This applies especially to the immediate local environment, as many of these small units are located in less privileged areas with open sewers. As a response to this, some states have tried to encourage small companies to move the production away from inhabited areas and to come together and share a common effluent treatment plant (CETP). Unfortunately not many of these collaboration plans have been very successful. There are several constraints associated with moving production. Access to an empty field is rare in India, and a greater distance to work involves loss of valuable time as well as transportation costs. Textile Production joined a common effluent treatment plant (CETP) in the late ’90s. The motivation for joining was that it was much cheaper to share the costs together with the other eighty production units that joined, than to carry them alone. The water in the Tirupur area has a high level of salt, and to achieve optimal results in textile production, especially the dying part, it is preferable to use clean, non-salty water. The common effluent treatment plants in the area do not remove salt from the water and when Textile Producer had the financial opportunity after a few years, they invested in an individual effluent treatment plant. Today the Tamil Nadu Pollution Control Board (TNPCB) requires that salt is removed, and the common effluent treatment plant no longer complies with the TNPCB’s requirement. The companies have applied for postponement in making the upgrade and a deferment has been granted several times, but no changes have been made. The authorities originally subsidized the CETP, but as a sanction for not upgrading the plant, they have withdrawn the subsidies, in addition to issuing fines for every liter of water discharged. According to the operational manager of Textile Production, this is a typical example of the vicious cycle many small companies end up in, due to inadequate finances. They know that they cannot afford to invest in an individual effluent treatment plant, and joining a common plant will also drive them to bankruptcy, and thus they figure out that they just have to push production ahead for as long as they can manage. Especially in the case of treatment plants, large and financially strong companies, like most of the Scandinavian TNCs, have an advantage in having the financial strength to invest in modern technology, and thus have better opportunities to both comply with the governmental policies and implement more proactive environmental measures.

As mentioned earlier, Textile Company was able to increase the price of their products because of the good quality their textiles got after they started to use the treatment plant; but as discussed earlier in the thesis, some TNCs might trade with Indian suppliers precisely to avoid such expenses. The owner of Plastic Company had experienced offers where environmental and financial interests would conflict:

> There are companies that come here and ask for ridiculous prices. (…) If you have to invest [in effluent treatment plant], you have to have an increased price. And are these companies or their customers willing to pay that price? (…) he doesn't bother if you work twelve hours or eighteen hours, or if you throw away what you want to throw away.' This is my price if you want to have businesses.' One year you take the order.

In such a situation, the Indian supplier might be influenced to lower standards or at least not implement anything beyond the authorities' demands.

6.2.6 Lack of interaction with the SPCB

> Because lot of things when you read you find that this will call for lot of expenses, but there are experiences and ways by which you don't need to go through it that way. You can do it in an alternate way that someone has already done. So good example sharing, what cost effective pollution control technology is available, who are the good suppliers and so on. These are the challenges a factory owner faces. Suppose if I have to invest 25 lakh rupees in a pollution control treatment, I'm very worried that I am selecting the right supplier or not! (Owner of Plastic Company)

Knowledge and information is also tightly connected with the aspect of financial concerns. Lack of knowledge can give the impression of environmental measures as more difficult and more expensive than they might actually be. Several of my informants thought the SPCB offered too little information and assistance on how to prevent pollution, and failed to suggest how they could become proactive in their environmental management. They missed a technical adviser who could give guidance and assistance in an area in which most of them do not have much competence. Textile Company and Paint Company, which are inspected by the SPCB, will get notifications on exactly what they have to do to comply with the governmental policies, but green categorized companies like Plastic Company and Offshore Consultants are pretty much left to themselves. Textile Production was the company with the most interaction with the SPCB, but the operational manager thought that the officials had adopted a policing

role towards the companies rather than a consultant one. After an inspection, they only point out the faults, without offering advice and guidance to how to improve, which some of the managers express a need for. When I asked him what had made them achieve such an active environmental management approach, if the authorities had not contributed guidance, he replied that the ideas and solutions for improvement came from salesmen and consultants of new technology.

Offshore Consultants had never been in contact with the SPCB, and the owner hardly knew they existed. Neither had he heard of other offshore companies that had been in contact with them. He thought that the MPCB seemed to be very little involved in the oil and gas sector, as he had never experienced any form of inspections or checks. He thought that the SPCBs should:

> (…) make some effort by making demands to the businesses' actions and especially their actions offshore. There are no inspections or checks whatsoever on the rigs that are offshore, and all the discharge goes overboard. As long as there are no orders or demands, most companies won't care. Money, everything that costs money is neglected.

Hitherto there are not that many foreign oil and gas companies in India, but there seems to be a prevalent perception that Indian soil (both onshore and offshore) holds large, untouched deposits of the valuable raw materials, and a substantial growth in the sector is predicted in the coming decade. Thus, to prevent environmental degradation by oil discharge, it is important that the authorities develop and establish good surveillance systems and management.

The SPCB are seriously hindered from being more present and offering extended guidance by being understaffed. The inspectors are too few to complete the mandatory annual inspections of all industries, and thus have no resources left to generate awareness and organize information activities. When I visited Paint Company's plant in Maharashtra, I got the opportunity to speak with a factory inspector who came on an unannounced visit. He and his colleagues form a group of ten inspectors who are to cover all the industry in Maharashtra. He was the Deputy Director of Industrial Safety and Health and had the responsibility for the industrial area where Paint Company, and around one thousand other companies, have build their Greenfield plants. The inspector is supposed to visit all these plants once a year as well

as to pay them a visit if complaints are filed, if they are suspected of not complying, or if accidents occur. There had been a fatal accident at one of Paint Company's neighboring plants the night before, and as he was in the area, the inspector used the opportunity to pay a visit to Paint Company's new plant. He told me that he and his colleagues felt overworked and would like to recruit more colleagues, but are not getting additional funding from the central government. According to the inspector, the central government expects that each inspector should be capable to cover approximately a thousand companies annually. I do not know the exact number of inspectors in other states, but I have the impression that they are understaffed elsewhere as well. If this is the case, it illustrates the lack of priority which enforcement of environmental policies has in Indian politics. It appears that the development in the business sector is substantially faster than the development of infrastructure and governance.

6.3 Summary

My case companies consider demands and pressure from governmental and corporate authorities as important pull factors in making them implement environmental policies. It is not that they are reluctant *per se* to prevent pollution, but that they probably would not have the necessary knowledge about either the problems or how to deal with them, if it were not for interaction with experts from TNCs, consultants or salesmen. Pressure from the public, such as family and friends, is also an important pull factor, not only in pressuring companies to improve their performance, but in creating a general attention to the issue. Knowledge about the problems and how to deal with them is essential for the motivation to implement proactive measures; and by having a smart environmental management, one can turn it to one's own advantage and create a win-win situation. The issue of knowledge, or rather the lack of it, has also been what the informants have emphasised as a push factor which makes implementation more complicated and slower than necessary. They missed a governmental source of guidance and information that could give them specific advice and help them to work out good environmental routines. Their proactive policies were a result of collaboration with the Scandinavian headquarters and TNCs. Collaboration with foreign TNCs do not always promote proactive environmental performance; one of the companies had experience of TNCs asking for such low prices that investing in environmental measures would be very difficult. Financial limitations can also be a factor holding back investments or adjustments that could benefit the environment, and these constraints become greater the smaller the company is. Also the extent of corruption makes it difficult to implement structural changes in the overall

environmental performance. Rigid enforcement and practical limitations, such as little available space, can effectively restrict the implementation of proactive measures.

In the following chapter I will further discuss the findings in the context of the debates and theories presented earlier in the paper.

7. Analysis

The case companies comply with the Indian environmental policies and are proactive in their environmental management. They are not to be considered as representative for Scandinavian TNCs in India, but that is also what makes them interesting to study. To study what factors and structures have made them adopt proactive environmental policies creates insight into the factors which should be prioritised in order to make more companies adopt an environmentally advanced management. To better clarify these factors, I will in the following section discuss the statements and findings from the previous chapter. Furthermore, I discuss the findings in the context of the previous discussion of pollution havens, pollution halos and the soft state.

7.1 Discussion of findings

Summing up my findings, as well as throughout the fieldwork, the most prevalent impression I got was that the companies were all displeased with the authorities' ability to enforce their own policies. They had all managed to implement the governmental policies, but I got the impression that they considered that they had achieved this in spite of rather than because of the authorities. Some of the factors which they pointed out as making it more complicated to comply with the environmental policies were: complex regulations, slow bureaucracy, corruption, financial limitations and too little interaction and guidance from the SPCB. The regulations were too tedious, long and complex to read, and some of the informants called for more concise and concrete advice on how to act according to the policies. The book of governmental environmental laws and regulations the managers are given is about 300 pages long. Many of the laws might be old fashioned and complex, but 300 pages should not be insuperable for a company manager. Would they complain about the complex and tedious legislation if they were asked about their accounts and taxes? And would they have expected or called for the authorities to assist with advice and guidance in questions of marketing strategies? I think not, and this illustrates that environmental issues are not taken as seriously as other aspects of running a business. Rather it is a surplus initiative for those who have extra resources. Several of the informants called for more collaborative interaction with the SPCB, rather then just being evaluated and controlled by them. However, the state pollution control board is a *control* board, and the control and pressure from the

SPCB is decisive in making companies comply with the policies, something all of the informants emphasised. And is it not a manager's responsibility to make sure that the company complies with the laws? Some of the informants considered it as unlikely that they would have acted as they do today if it had not been for the pressure and guidance from governmental and corporate authorities. What is the limit on exclusion of liability? In the final analysis, is it not the companies' responsibility to act according to the national laws without expecting the authorities to pamper them?

Well, yes, it is the corporate management's responsibility to act according to the law, but on the other hand is it also statutorily established that the governmental institutions, such as the State Pollution Control Board, have an obligation to not only control pollution, but also to promote the prevention of it. A good way of doing that would be to facilitate and ease the process of policy implementation for corporations, and to reduce negative associations towards policy implementation. In aiming to prevent the environment from pollution by industrial and corporate activities, it is necessary to study what actually makes the corporations implement environmental policies and measures. All of my informants stressed, as written above, the importance of knowledge. None of them called for financial support or benefits of any kind, other than more and closer involvement with the governmental institutions. Awareness of and knowledge about the environmental problems their activities can cause can create a stronger feeling of responsibility. Guidance on how to deal with the problems can also give the feeling of capability and thus more will to do something about the problems. With adequate knowledge one can, as illustrated in some of my cases, achieve a win-win situation where both the company and the environment have benefited. The corporations have a better knowledge of their own activities and should therefore play an important role in the creation of solutions. If they are made aware of the problems, they would be better qualified than the SPCB to identify the source of the problem and determine what could be done differently to prevent it. One of the informants suggested that for the SPCB to be resource efficient, they could hold seminars for several companies at a time. This would also provide what several of the informants missed: a forum to meet and share experiences with other companies in the same situation. Creating a joint forum where information and experiences could be shared, where one could collectively work out good solutions, could lead to a win-win solution for the SPCB. For the Indian government to invest in an extended

program of information and training of environmental management would be an investment in the future. As one informant said; the policies will probably be implemented sooner or later, but with guidance it will happen much faster.

Regardless of increased efforts to create awareness, control and pressure from the authorities will still be important to ensure that the companies implement and comply with the environmental policies. There is still a long way to go before environmental concerns become a focal point of commercial companies,[35] and it is therefore necessary to have someone remind them of their responsibility and push them further. However, in view of the understaffing in the SPCBs, it appears that not only corporations, but also the federal and state governments fail to prioritise environmental concerns. As in the example of Maharashtra, where each inspector had the responsibility of a thousand factories, I find it very unlikely that the SPCB can manage to fulfill its tasks.

7.2 Relevance of the "soft state"

In chapter 3, I explored Gunnar Myrdal's idea of a soft state; a state where ideals and reality, legislation and implementation do not correlate. At the end of the chapter I raised the question of whether the idea of India as a soft state is still relevant today. As all of my case companies have implemented the governmental policies, my study does not immediately support the theory of India as a soft state unable to implement its own polices. But in studying the attitudes of my informants, it is obvious that they ascribe to the Indian state many of the same characteristics as does Myrdal. They had all observed the extensiveness of corruption and how this could be used to make inspectors allow more than they are supposed to; while some companies had to pay extra to get their applications considered. On the other hand, there were several cases where the authorities showed that they were anything but soft. The first is the case of Paint Company, which had to build two tanks to store inflammable solvents because the governmental and corporate environmental policy differed. Even if the management at Paint Company objected, arguing that their policy was of a higher standard than the governmental one, the officials did not bow to the pressure, and Paint Company ended up building two tanks. For the authority to be so strict in cases

[35] Excluding companies engaged in fair trade programs.

like this might not always benefit the environment, but it exemplifies India as a hard rather than a soft state. Another example from the findings that exemplifies the Indian state's power of enforcement is from Plastic Company. This company, together with all the green categorised companies in the area, was notified by the Gujarat Pollution Control Board (GPCB) to put up a board in front of the factory plant displaying how much they discharge, how much power and water they use and other similar information. The companies were reluctant to post this notification, and claimed that they would never have the time to do it. When the GPCB threatened to withhold their licenses to produce, all the boards were installed within months. This example also shows that the authorities do not bow to pressure from the companies, and that they are able to enforce their own policies – contradicting Myrdal's idea of a soft state. What is also interesting in this case is that the companies actively tried to avoid putting up the boards, and thus used a reactive strategy rather than a compliant and proactive one, as I have mainly discussed in this paper.

I have no such results in my findings, but it has been reported that companies which should have been closed down due to unsatisfactory conditions, were never closed down. According to the managing trustee of a Tamil Nadu-based NGO, the federal and state governments are under heavy pressure from the civil society not to carry out sanctions:

> There is so much of foreign exchange that they are earning from the exports. So what would happen if they closed down the factories? That much of revenue would go. So the government can not afford to be very strict.

There is a conflict between employment and environment in India. The closing of a factory could have a large impact on people's personal finances, as they would not get any compensation for the lost working days. For people living on the edge of the poverty line, any loss of income would be severe. People dependent on full salaries will protest against a closing and in some cases, the authorities have bowed to the pressure, thus supporting Myrdal's almost forty year-old theory.

Myrdal introduced the idea, and started the debate about the soft state, decades ago, but the debate has remained alive and developed according to the changes in the

societies. Today the debate is closely linked to structural changes due to globalization. Some scholars argue that globalization has reduced the state's sovereignty and its ability to regulate domestic and international affairs; free market capitalism has hollowed out the state and left it with no real power. According to the advocates of this perception, the state is nothing but an artificial and outdated formality, and the large actors on the global market, such as TNCs, are the actual agents of power. In my own study, I saw tendencies of the TNC setting the agenda, rather than the Indian authorities. They had their own corporate policies and auditing requirements that they complied with, and as long as they knew their standards were good enough for the authorities, they were not too concerned about the authorities' opinions. Most of them were not very impressed with the authorities' ability to enforce governmental regulations, and regarded their own management and strategies as both better and more effective. In a way, that is true, as the case companies did hold a higher standard than that which was required of them by the authorities. Some felt that the government did not manage to keep up with the development in environmental management, but was lagging behind. The development within the business sector was going faster than that in the governmental regulatory system.

The Indian authorities are in many cases lagging behind when it comes to environmental management, but nevertheless, this does not make them a soft state. Other characteristics of a soft state, such as corruption, also exist in the Indian government, but at the same time, they are relatively autonomous and are to an extent successful in enforcing policies. I do not find the term "soft state" suitable for the Indian state today. Another term more suitable is the Rudolphs' characterization of the Indian state in their study published in 1987, *In Pursuit of Lakshmi: The Political Economy of the Indian State*. Here they characterize the Indian state as a paradox, changing between strength and weakness and thus being simultaneously "weak-strong". This is a term that better illustrates my impression of the Indian state's governing, which is also supported by my findings.

7.2 Pollution halos or havens?

In chapter 2, I discussed TNCs' potential environmental impact in relation to the hypothesis of pollution halos and havens. The hypothesis of pollution halos emphasises TNCs' ability to transfer environmentally advanced technology and

improved environmental management systems. The pollution haven hypotheses on the other hand, suspect TNCs of relocating in order to take advantage of a more relaxed environmental legislation, setting off a race to the bottom where countries successively lower their standards in order to attract investments.

7.2.1 Pollution haven

None of the case companies gave more relaxed environmental regulation as the reason for establishing business in India. As discussed in chapter 2, even if the reason for relocating is not relaxed regulations, companies still might take advantage of the opportunity when they get it. Several of my case companies admitted, for example, to having paid bribes to officials, but the issue of corruption is not a black-and-white question in the context of India, and in these cases I have little reason to believe that this has influenced the outcome of environmental inspection to such a degree that they are in fact not compliant with the governmental policies. Lack of focus on environmental issues can also contribute to the making of pollution havens. The three producing case companies had proactive environmental management, and can therefore be ruled out in that concern. Offshore Consultants, however, did not have any corporate environmental policies, as they regarded their activity as not polluting. I have no grounds for determining the environmental impact of their activity, but as they are not categorised as red, and have been active in promoting effluent treatment technology, I take it that they are also not what the advocates of the pollution haven hypothesis would characterise as contributors to pollution havens. They are however the case company most closely linked to the extraction of raw material. As written in chapter 2, relocation based on the pursuit of extracting raw materials is considered as having a larger environmental impact on the host country, than business aiming for new markets and lower labour costs. Even the owner of Offshore Consultants stressed the fact that there is no governmental control of offshore activities in Indian, so pollution prevention measures are based solely on voluntary initiative or demands from TNCs' headquarters. The possibility to pay one's way around regulations, understaffing in the SPCBs and limited regulatory systems, are all beneficial factors for companies relocating in order to escape strict environmental legislation, but not necessarily sufficient. The Indian government has not structurally changed its environmental policies in order to attract investment. Rather they have focused on the

availability of skilled labour and a continued decreasing tax. In comparison with China, a striking difference is that the largest share of foreign investments in China are in the industrial, resource intensive sectors, while India has distinguished itself within the global market of information and the service sector.

7.2.2 Pollution halo

Opposing the pollution haven hypothesis, advocates of the pollution halo hypothesis believe that TNCs can improve the environmental situation in the host country through technology transfer and spillover from advanced environmental management. Textile Company and Paint Company both had very advanced and environmentally sound technology, but as both of them are more or less self-sufficient, their potential contribution to technology transfer is limited. Nevertheless, Textile Company was the first company in Tirupur to buy an effluent treatment plant of that kind and more than 150 have followed in their footsteps. Besides the direct transfer, transfer of technology can take place indirectly by companies provoking a "race to the top". As Textile Company was the first one to invest in this kind of effluent treatment plant, they might have been responsible for this development of technological advancement. Offshore Consultants is the case company which has the biggest potential to contribute in the transfer of more environmentally sound technology. They are distributors of technology which makes the extraction of oil and gas more effective and less polluting. Promotion of and expertise on this type of technology is also what the managing director regards as their means to positively contribute to the environmental situation in India.

Regarding environmental management, the three producing case companies were proactive. Paint Company has affiliates all around the world and the same environmental standards are applicable to all of them. They try to expand the effect of their management standards by visiting their suppliers to check if their practice complies with the governmental policies, and to what extent this is derived from Paint Company's corporate policy. They do not require the same standard as they have themselves, but if they find the standard unsatisfactory, they tell their suppliers that they can collaborate at a later point if the conditions are rectified. If the suppliers do change their practice and management, Paint Company will have had a genuine impact on environmental management. Furthermore, the inspector visiting Paint

Company the same day as I was very impressed by the way the production was organised and managed, from the functionality of the building to the environmental accounts. He announced that he wanted to use them as a showpiece for other companies in the area. To act as an inspiration for other companies can contribute to spreading good management practices, such as the case where Plastic Company was inspired by another company to install rainwater harvesting systems. This is also something that the informants wanted more of; real life examples of how to achieve good environmental management.

7.3 Concluding remarks

TNCs have the potential to create both pollution havens and halos. In this study I find little evidence of the creation of a pollution haven in India. The case companies have an environmental performance of a higher standard than the governmental policies, and are therefore not to be considered as contributors to a pollution haven. The Indian governmental policies are lower than those of the case companies, but they are still not low enough to facilitate a pollution haven in any substantial extent. As the case companies are proactive in their environmental management, they are more likely to contribute to the creation of a pollution halo.

Even if the case companies hold a high standard of environmental performance, it is not to be overlooked that all production activity requires substantial amounts of resources and wear on the environment. At one of Textile Production's plants, they used about twelve tons of firewood every day to cover their power needs. Paint Company also had a demand for power that exceeded what the state government had granted them, and supplied it by using two generators. The generators are amongst the best available in the market, but are still a very resource-intensive solution. TNCs' production is on a large scale and the use of power, water, and wood; the production of waste and the intervention a factory makes on its surroundings, will therefore always have a depredatory effect on the environment. The fact that industry is resource intensive and damages the environment is, however, a fact wherever production takes place. For example Paint Company has the same type of production and the same environmental policy in all their affiliates around the world; what differs is how the state authority deals with this challenge to prevent and reduce the degradation. The Indian environmental laws hold a standard that is fairly good in an

international context, and the focus of the authorities should not be to pass further laws and regulations, but to ensure that the ones already passed are enforced and established in the society – first things first. I will not define India as a soft state unable to implement their own policies, but they still have a long way to go to achieve the standards envisioned in the national set of environmental laws. If the focus remains on implementing and enforcing the existing policies, there will still be companies present which perform on a more advanced level than the governmental requirements. Commercial corporations have the potential to play an important positive role in the society, but this presupposes that the government plays its role by facilitating it. By taking into account what the corporations consider as push and pull factors, the authorities can better manage to create a level ground for both corporation and authority to make the most of their potential. By complementing each other's roles, a situation could be created where economic and environmental interests would not be incompatible.

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8. Concluding Remarks

The purpose of this thesis has been to get greater insight into what makes TNCs implement environmental policies, even beyond what is required of them by national law. Identifying the factors influencing corporations' behaviour can create a better basis for designing policy frameworks, and point to areas in which countries should concentrate their policy efforts to ensure improved environmental performance amongst TNCs. The aim is to create a situation where environmental and economic interests are compatible, meaning that one can prevent environmental degradation while preserving the country's ability to pursue economic and social objectives.

Through the views and experiences of four case companies, I have identified the factors they stressed as important hindrances and motivators in their process of implementing governmental and corporate environmental policies. One of the most central factors appears to be the issue of knowledge. Knowledge of environmental problems, or the lack of such, was considered both a source of motivation for and hindrance to the implementation of environmental measures. A lack of knowledge about the subject leads to it not being prioritised by corporate management. In cases where the management are aware of the problems, but do not know how to solve them, they will often be intimidated from facing them, due to the prevailing perception that environmental and economic interests are incompatible. The case companies that have improved their knowledge of both the problem and the solutions have managed to turn the environmental measures to their own advantage. The ability to see the value of proactive environmental policy as an advantage rather than a burden can explain why they have adopted a proactive policy, but it also supports an important point. It is important to encourage a change in attitudes towards pollution prevention, and make TNCs capable of creating a corporate-specific win-win situation. If it is possible to profit from the implementation of environmentally friendly solutions, the companies will more easily embrace the ideas and take more responsibility without expecting the authorities to pamper them.

As mentioned above, knowledge is a key factor for encouraging TNCs to adopt more environmentally friendly practices, but where do they get this knowledge? According to my informants, the case companies got all their inputs, ideas and encouragement

from their headquarters, customers and consultants. They did not get any guidance from the authorities, and their proactive performance took place in spite of rather than because of governmental actions. They called for more guidance from the governmental institutions, and an opportunity to learn from others' experiences. It was due to obligations to their corporate policy that they held a higher standard than what the authorities demanded of them. This shows the importance corporate policies and environmentally conscious managers can have, but in order to prevent greenwashing, the involvement of an external factor is essential. TNCs have to respond to market demands, governmental regulation and pressure from the public. Knowledge about environmental consequences and solutions are important not only for TNCs, but also for external stakeholders, so that they pressure the corporations and encourage them to change. Awareness amongst the public can also be beneficial for the authorities as the corporations will get pressure from an additional actor. This actor might even be more valuable to the TNCs, as it consists of potential customers. The focus on environmentally friendly products today amongst customers can serve as a pull factor for proactive practices. Most TNCs are dependent on their image, and will therefore seek to achieve a good reputation amongst the public. The presence of the authorities is nevertheless very important as they are the ones with the means to sanction corporations that do not comply with policies. Pressure from the authorities was also emphasized by the case companies as decisive for the implementation of environmental measures, even if they had their own corporate policies. The presence and enforcement of the authorities is essential to ensure that the companies without a corporate policy act according to the governmental regulations. In such cases it is decisive for the environmental outcome that the authorities enforce their policies in a satisfactory manner. Corruption is a phenomenon that hinders the implementation of such policies, and all of my case companies confirmed that corruption was very much present within the bureaucracy. It is important that the Indian authorities focus on removing the corruption culture, to ensure reliable enforcement of the governmental policies. In other words, the authorities have to fulfill their role to enable the TNCs to utilize theirs.

The contemporary role of the authorities and corruption problems lead to the discussion of pollution haven, halos and India as a "soft state". In this study, I found that the Indian authorities exhibit some characteristic of a "soft state". This becomes

evident through cases where they have bowed to external pressure, the pervasiveness of corruption, and the gap between environmental legislation and implementation. But the Indian authorities also show opposite tendencies, and rather than adopting Gunnar Myrdal's description of India as a "soft state", I find it more appropriate to use the term "weak-strong", introduced by the Rudolphs. Weak tendencies such as corruption enable companies to avoid regulation, and thus create a pollution haven. However, the Indian environmental legal framework does not have a sufficiently low standard to facilitate a pollution haven, so if a pollution haven exists, it would not be due to the environmental laws, but rather to lack of enforcement of them. The case companies have an environmental standard beyond the legal framework and are therefore not contributing to the creation of a pollution haven in India. The case companies, with their advanced environmental management and technology, are more likely to contribute to the creation of a pollution halo. Two of the case companies are more or less self-sufficient and thus have a limited potential to influence other companies' performance. All of them should make greater demands of the companies they cooperate with, whether suppliers of raw materials, or companies they sell their waste to.

India is in an important phase of economic growth. The share of Indians living under the poverty line is still very high and it is important for the Indian government to have economic growth to achieve better living conditions for marginalized people. These are usually more dependent on natural resources, and are the ones who will suffer most from environmental degradation. For this reason it is especially important not to let economic growth come at the expense of the environment. It is therefore essential that the Indian authorities strive to achieve a society where ideals and reality, legislation and implementation, correlate. When the authorities manage to fulfill their role, it enables corporations to better contribute to the society in a positive way. TNCs do have an ethical responsibility to act as sustainable as possible; and to achieve the best result it is important that the authorities facilitate it. Knowledge is the key to success in this matter. The TNCs need information about which strategies are effective and successful. I hope this study has contributed to this by identifying the importance of the authorities' taking an active role in enforcement, pressure and guidance. It is nevertheless necessary to conduct further studies on how win-win

situations can be achieved with a special focus on medium and small companies with fewer financial resources.

Appendix

Date	Title of informant	Company/institution	Remarks
8th March 2008	Managing Director	Offshore Consultants, Mumbai	Tape recorded, interview conducted in Norwegian
16th-20th March 2008	Production Development Manager	Textile Retail, Tirupur	Informal talks in Norwegian throughout the stay.
18th March 2008	Operational Manager	Textile Production, Tirupur	
18th March 2008	Environmental Manager	Textile Production, Tirupur	
18th March 2008	General Manager, Processing Division	Textile Production, Tirupur	
18th March 2008	Technical Director	Distributor of effluent treatment technology, Tirupur	
20th March 2008	Managing Trustee	NGO, Coimbatore/Tirupur	Tape recorded
1st April 2008	Project Manager	Paint Company, Pune	Interview conducted in Norwegian

1st April 2008	HR Manager	Paint Company, Pune	
1st April 2008	Operations Manager	Paint Company, Pune	
1st April 2008	Factory inspector	Maharashtra state, Pune	
3rd April 2008	Business Developer Manager	Scandinavian retailer, Daman	Interview conducted in Norwegian
3rd April 2008	Business Developer Manager	Scandinavian retailer, Daman	
3rd April 2008	Partner/Owner	Plastic Company, Daman	Tape recorded
25th January 2008	Michael W. Hansen, Associate professor	Copenhagen Business school, Copenhagen	Interview conducted in Norwegian
14th February 2008	Chairman of the Board	Steel Company, Copenhagen	Interview conducted in Norwegian By phone

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